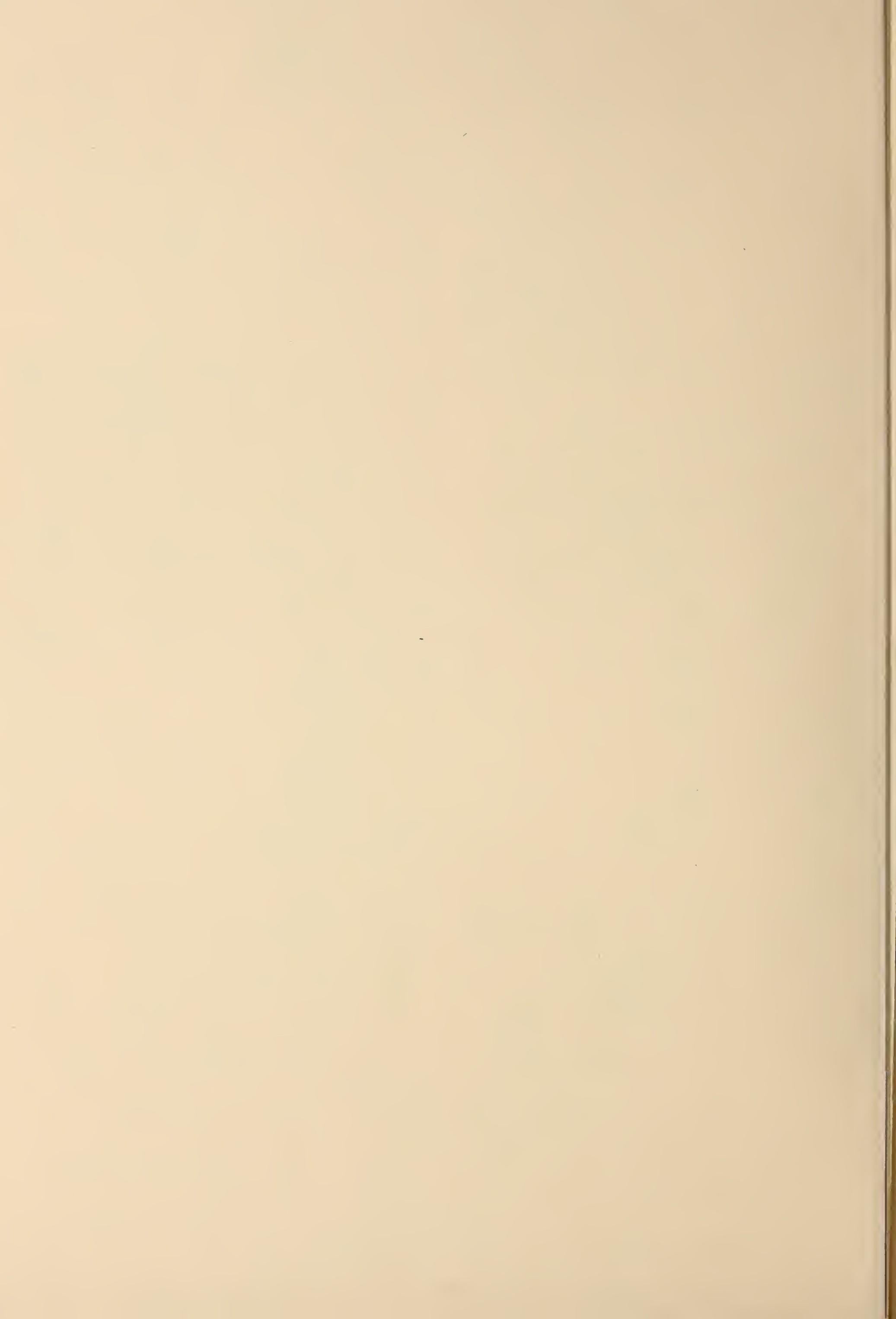


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FARM & FIRESIDE

EASTERN EDITION.

VOL. XIV. NO. 19.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, JULY 1, 1891.

TERMS 20 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,700 COPIES.

The Average Circulation for the 24 issues of
the last 12 months, has been

250,670 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,300 copies, the Western edition
being 150,400 copies this issue.

Farm and Fireside has the Largest Sub-
scription List of any Agricultural
Journal in the World.

Current Comment.

In reply to an inquiry about the safety
of national banks, we publish the fol-
lowing from the report of the com-
ptroller of the currency for 1890, which
covers the whole ground:

"Out of 4,455 national banks organized
since February, 1863, only 139, or about
3.12 per cent, have been placed in the
hands of receivers; this includes 9
which had been previously placed in
liquidation by the stock-holders, but upon
their failing to pay their depositors, the
comptroller appointed receivers to wind
up their affairs. Of the 139 failed banks,
32 have paid creditors in full, principal
and interest; 6 have paid principal and
part of the interest, and 12 have paid the
principal only. The affairs of 99 of the
139 banks have been finally closed, leaving
40 in process of settlement, of which
10 are virtually closed, with the exception
of pending litigation, leaving 30 receiv-
erships in active operation. The total
amount so far paid to creditors of insol-
vent national banks has been \$36,903,240,
upon proved claims amounting to \$54,-
650,931. The amount paid during the year
has been \$1,601,845, besides \$210,823 paid
for dividends declared prior to November
1, 1889, on claims proved since that date.
Assessments, amounting to \$14,320,350,
have been made upon stock-holders of insol-
vent national banks, under section 5,151
of the revised statutes of the United
States. From this source the gross col-
lections amount to \$6,363,675, of which
there has been received, during the past
year, \$236,538. Suits are pending in some
cases."

Out of the 4,455 national banks that
have been organized, 888, including the
139 that have failed, have passed out of
the system.

From the above it will be seen that the
creditors of insolvent national banks have
suffered a total loss of several million
dollars, but the sum is a comparatively
insignificant one considering the vast
amount of business transacted by national
banks during the history of the system.

In regard to deposits, the report has the
following to say:

"The deposits of a national bank are
now its principal source of profit. Originally
they realized a profit upon circulation
as well as deposits. The high rate of
premium commanded in the market by
the interest-bearing bonds of the United
States, which are required to be deposited
by these banks as security for their cir-
culation, has rendered the issue of circu-
lating notes, in most localities, unprof-
itable. Hence, national banks now organ-
izing issue only so much of circulation as

is obligatory under the law. They are
fully cognizant of the fact that no profit
will be realized on account of the right to
issue notes, and proceed in their organ-
ization mainly because of the gain to re-
sult by reason of deposits.

"The deposits of a bank usually bear a
close relation to the degree of confidence
reposed in it by those who live within the
sphere of its business activities. The un-
precedented success which has, as a whole,
attended the operations of banks in the
national system during its twenty-eight
years' trial, has inspired a degree of confi-
dence not attained by any of its prede-
cessors.

"Whatever may be the opinion enter-
tained with regard to the expediency of
granting to banks the right to issue notes
for circulation, it will be universally con-
ceded that the public welfare is promoted
by the augmentation of bank deposits.
In this respect we find the interests of
the banks and the whole people identical.
It is of great importance that the circulat-
ing medium of the country be kept within
the channels of trade. Whenever the
surplus earnings of the wage-workers, the
professional men, the farmers, the man-
ufacturers and the tradesmen are per-
mitted to remain idle in the custody of
individuals, legitimate borrowers are
caused to pay increased rates of interest,
and business and commerce languish for
want of adequate banking facilities."

National banks are sound and safe institu-
tions. Their circulating notes are se-
cured by United States bonds, deposited in
the United States treasury, and are cur-
rent all over the land. Their operations
being under the inspection and
supervision of the comptroller of the cur-
rency, and conducted according to strict
United States statutes, the highest attain-
able safety is secured for depositors.

The only way to abolish national banks
is to provide for a better system. When
that is done it will be an easy matter.

It is reported that the Alliance in Kan-
sas is considering a scheme to estab-
lish banks and warehouses throughout
the state on the sub-treasury plan, the
capital to be furnished by private sub-
scription.

The plan is to have a sub-treasury in
each county under the management of the
Alliance. In the warehouse, to be built
in connection with the bank, the farmer
may deposit his wheat, corn and other
imperishable farm products, and receive a
check for 80 per cent of their value. He is
to be allowed to let them remain on pay-
ment of a small percentage for storage and
insurance, until he desires to sell them.

The amount of produce deposited must
not exceed the capital stock of the bank.
The checks are to circulate as money.

It would be a good thing to test this
scheme. If the farmers of Kansas put it
in operation and it works successfully,

well and good. If it does not work, the
others may profit by their experience
and let it alone. Let them go ahead and
try it.

It is extremely doubtful if political
agitators care to have the scheme tested
in this way. The result of a test would
be to take the sub-treasury plan out of
politics; for the failure of this scheme
would be a strong argument against
government agricultural sub-treasuries.
While its success, on the other hand,
would demonstrate that there is no need
or excuse for calling on the government
to do what can be well done by private
capital. The political agitators are wily
enough not to let a practical test like that
proposed interfere with their occupation,
so we think that the Kansas farmers will
be discouraged from making the test.

WHAT agricultural interests may be
made as prosperous as manufacturing
and other industries, for the
happiness of their fireside and for the
future safety of their country, farmers
must take a more active part in politics
than they have done in the past.

They must do so in self-defense. But
when once in the field of active politics, it
is not advisable for them to fritter away
their strength by forming new parties.
Let them first attend the primary meet-
ings of their respective parties, and select
the best men for their representatives.
Through a non-partisan organization like
the Farmers' League in the eastern states,
or the Farmers' Union of Ohio, they can
accomplish the most by throwing their
entire strength to candidates of the reg-
ular parties who are pledged to work for
the interests of agriculture. Their first
work is to compel all parties to nominate
the right men. Then every man can vote
his party ticket and for representatives
that will protect his interests at the same
time. Failing to secure the right men on
all tickets, their votes can be cast regard-
less of party lines.

It will be very inadvisable for the farmers
of Ohio to waste any votes on a so-
called third party in Ohio this year. The
next legislature of the state will consist of
Democrats and Republicans. Farmers can
secure enough members of both to give
them a good working majority, and
through them can secure all just legisla-
tion they demand. With two exceptions,
every measure demanded by farmers was
passed at the last assembly. For farmers
to neglect their present golden opportu-
nities and cast their votes for new, third-
party candidates, who have not a shadow
of a chance of being elected this year, is
worse than foolish. It would give the
politicians in the other parties, who are
indifferent or inimical to the interests of
agriculture, a clear field. Lose no vantage
ground that has been gained.

UNDER the act of Congress, passed one
year ago, directing the monthly pur-
chase of 4,500,000 ounces of silver
bullion and the issue of United States trea-
sury notes thereon, there is added annually
to our currency about \$54,000,000. The act
provides for the use of the American
product of silver, and the notes issued on
it being "legal tender in payment of all
debts, public and private, except when
otherwise stipulated in the contract," are
as good money for all purposes as coined
silver.

The bullion value of a silver dollar is
now less than eighty cents. It is claimed
by many that its bullion value would im-
mediately advance to par with gold on
the passage of a free silver coinage bill.
Many others claim not, and there are vol-
umes of argument on both sides.

Now it strikes us that the safest and
simplest way to settle the whole question
would be for the next Congress to add to
the present law, an amendment providing
for the free coinage of silver whenever
silver is at par with gold. Then, if free
coinage can advance silver bullion to \$1.29
per ounce at all, it will go there at once.
Otherwise, the purchase of the bullion
and the issue of the notes will continue as
at present, and all the dangers of a de-
based coin and a depreciated currency will
be avoided.

Of course, this would not suit the ones
who want 80-cent dollars with which to
pay their debts, but for money the ma-
jority of the people of this country cer-
tainly favor the use of gold and silver,
and paper based on them, all equal in the
fact and equal in the law.

THE principle of reciprocity can be
applied either to protection or to
free trade. In the present tariff laws
it is applied on protection lines. It can
be applied on free trade lines as well, and
that is the only way that this country can
readily secure real free trade with other
countries when she wants it.

The Prohibition party of Ohio, in con-
vention held in Springfield last month,
adopted as part of the platform the fol-
lowing plank:

"Tariff should be levied only as a defense
against foreign governments which levy
tariff upon or bar out our products from
their markets, revenue being incidental.
The residue of means necessary to an
economical administration of the govern-
ment should be raised by a graduated in-
come tax."

This means free trade. It is a strong,
clear, unequivocal declaration in favor of
free trade, pure and simple, absolute and
reciprocal. It is against both a protective
tariff and a tariff for revenue only. The
plank is an unprecedented one in the
history of American polities. To this
convention belongs the honor of being
the first to adopt a resolution applying
the principle of reciprocity to free trade.
The application is sound and logical.
When the United States wants free trade
with other countries, that is the only way
by which it can be readily secured.

IN a recent number of the *Rural New-
Yorker* is an illustrated description of
a new invention that will become a
great favorite with the growers of ensilage
corn. It is a corn-harvester, a machine
for cutting and loading corn. It is built
a little after the plan of a self-binder, with
strong, high elevators for conveying the
corn, as fast as cut, to a wagon driven
alongside the harvester.

The machine was used successfully at
the Cornell University farm last year for
cutting and harvesting one hundred tons
of ensilage.

In heavy corn it required only five min-
utes to cut and load one ton. The ma-
chine is an assured success, and does away
with the enormous hand labor of cutting
and loading ensilage corn. It will greatly
cheapen the cost of ensilage.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
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Our Farm.

SUGGESTIONS FROM STATION BULLETINS.

BY JOSEPH (TUSCO GREINER.)

FOOT-ROT IN SHEEP.—The veterinarian of the Michigan Agricultural Experiment Station tells us in Bulletin 74 of two forms of foot-rot, the non-contagious and the contagious forms. The non-contagious foot-rot is by no means uncommon, and originates from a variety of causes, which produce symptoms varying with the cause. The malady usually begins by inflammation of the space between the claws, which extends; and if not arrested, the whole foot soon becomes involved and the hoof may drop off, leaving a loathsome sore with a most intolerable odor. It may be caused by a splinter or other foreign body getting into the part and filth finding its way into the wound. Or the trouble may arise from decomposed grass and filth of every description finding a lodging place between the claws of sheep that were taken from high, gravelly or rocky lands and placed in boggy pastures. Whole flocks of sheep may thus become affected with foot-rot. The front feet often succumb to the exposure first, and the sheep in a short time may be found grazing on their knees.

If proper treatment is given in the early stages, the malady may be overcome in a few days. Remove all superfluous horn; then cleanse the wound thoroughly with warm water. If blisters have formed, apply butter of antimony by means of a sponge about the size of a small bird's egg. Saturate it with the fluid and apply to the affected part, taking care not to allow the medicine to extend into the healthy tissues, and thus avoid unnecessary pain for the animal. This application may be repeated in twenty-four hours if the wound is then still foul, with a fetid discharge from it. A third application will seldom be required. Further treatment consists in keeping the foot as clean as possible, and in applying daily some antiseptic fluid, like sulphate of copper one part, rain water twelve parts. Sulphate of iron (green copperas) in similar proportions has also proved effectual. The two solutions may be used alternately. The animal is to be fed well and its general comfort to be attended to.

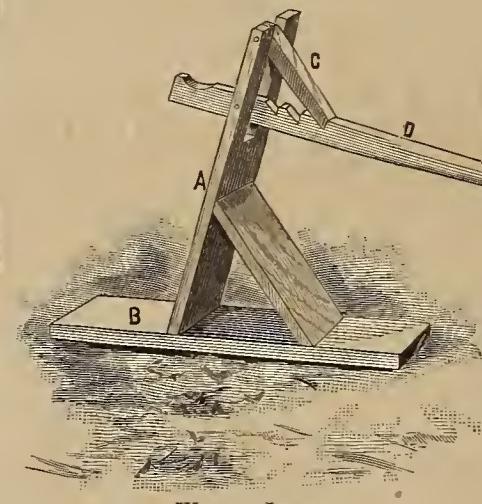
The contagious foot-rot is no doubt caused by a specific poison, which often makes rapid inroads upon the constitution of the afflicted creature, causing it to die of a debilitated condition called marasmus. The early symptoms are characterized by lameness in one or more feet; the space between the claws will be red and tender, soon to be followed by the appearance of several minute vesicles containing a

watery fluid; shortly a sticky, foul-smelling, lardaceous substance oozes from the affected parts, proud flesh forms, or blisters may make their appearance, etc., and so on through many more stages until death. The disease is communicated largely through the matter exuded from the sores, and is spread in a great variety of ways, notably through litter, pasture fields, roads, freight cars, boats, washing-pens, etc.

The treatment is as follows: The flock should be examined carefully, and the healthy separated from even the suspected ones. Perhaps it would be wise to put them into a trough containing of carbolic acid one part and water two hundred parts, about three inches deep; a few minutes in this mixture will suffice. The flock should be looked after carefully, and any that are suspected taken out. The affected ones, of course, should be kept by themselves, and treated in somewhat the same fashion as was recommended for the non-contagious rot. Cleanliness, above all things, must be carefully observed.

GOOSEBERRIES AS A MONEY CROP.—As a money crop the gooseberry is not generally held in great respect. And yet it has possibilities unsurpassed by almost any other fruit. The New York Experiment Station, Geneva, put this matter to a very practical test last season. A five-pound basket of several varieties was picked at fruiting time and taken to a leading grocer of Geneva. He sold them as follows: The basket containing the large varieties brought fifty cents; those containing the medium and small varieties brought forty cents. The grocer stated that he could dispose of a large quantity at those prices. The average yield of three-year-old plants was over five pounds per plant, and as 2,722 plants can be accommodated on one acre, the results would have been 13,610 pounds, which, if sold even as low as 25 cents a basket, would bring the sum of \$635.

Such a result is not beyond the reach of any good grower, and it gives a flattering aspect to the business. Personally, I am convinced from my experience with the



WAGON-JACK.

crop that there is money in it if properly handled. I would just as soon risk engaging in gooseberry culture as in strawberry or currant growing, and I know there is money in these crops. The one trouble with the gooseberry is the mildew; but the station also tells us how we can grow gooseberries free from mildew. The report is as follows:

The practice at this station is to begin spraying as soon as the young leaves unfold, and continue the spraying at intervals of from eighteen to twenty days. In case of frequent heavy rains it will be necessary to spray more often. The fungicide used is potassium sulphide and liver of sulphur; formula: one half ounce dissolved in one gallon of water. If hot water is used, the sulphide will dissolve more readily. As commercial liver of sulphur costs but little—from fifteen to twenty cents per pound—and one gallon will spray ten or twelve large bushes, if applied with a force-pump and spraying-nozzle, it will be seen that the largest cost will be that of labor. If spraying is done with a syringe on a small number of plants, the amount of liquid necessary will be increased, of course; but however lavish one is with the solution, the beneficial results will more than compensate for the outlay.

FEEDING EXPERIMENTS WITH LAYING HENS.—Bulletin 29, new series, of the New York Experiment Station, reports the results of experiments made with hens for the purpose of finding the ration that will give the most eggs. Some hens were

given throughout the year a nitrogenous grain ration (oats, etc.); others during the same time a more carbonaceous ration (corn, corn meal, etc.) The fowls having the more nitrogenous ration were always in better health; and their plumage, except during a short molting period, was always full and glossy, while those having the more carbonaceous ration were oftener sick and their plumage was always ragged and dull. For some time the vices of feather pulling and egg eating were common among the latter.

The product of eggs, however, from the hens having the corn meal ration was over twenty-eight per cent more in number, and in weight twenty-four per cent greater than those with more nitrogenous food. With fowls of the smaller breed, which are considered the better layers, the number of eggs was over fifty-seven per cent higher, and the weight about forty-nine per cent greater from those fed the less nitrogenous ration.

The product of eggs secured during the second laying season, even with the disadvantage of the same foods for two consecutive years, was but little less than that of the first season. There are usually about three months between the first and second laying seasons. If there should be four, the cost of maintenance during that time for hens entirely dependent on the feed-box would be, at the ordinary prices of grain, an average of about nineteen cents for the smaller breeds and about twenty-four cents for the larger; so unless pullets can be produced at less cost, there would appear little advantage in replacing hens the first year, as is often recommended.

The results of several feeding experiments indicate that for laying fowls of smaller breeds, Indian corn or corn meal can be fed in quite a large proportion, with a considerable margin in its favor over certain more nitrogenous foods; but that while smaller fowls, even when confined, suffer little serious disadvantage under the ration, larger breeds will not endure for long periods, a very large proportion of corn meal in their food, and unless at liberty, will do better with a somewhat more nitrogenous ration.

WAGON-JACK.

Mr. L. L. Pierce sends a description of a handy wagon-jack. In the illustration, A is a piece of oak 2x4, 33 inches long; B is a 2x4, 14 inches long; C is 12 inches long, and the lever, D, is 5 feet long, the shorter end being 1 foot in length. Its construction is fully explained by the cut.

CAUSE OF DEPRESSION IN SHEEP RAISING.

Of actual sheep raisers who are depressed, ninety-nine per cent are so because they are behind the times in purposes and methods of profitable sheep husbandry. Never has there been a time in the history of sheep raising in the United States when the outlook was more safe, sound and profitable than now for the wide-awake, enterprising, progressive sheep husbandman.

No line of farm animal industry has made the substantial, marked progress in the last six years that have sheep. No more new money has been made by handling stock than has been made handling sheep. Who are these successful men? As a rule they have not been farmers or ranchmen; but they have been shrewd, keen men, who saw their golden opportunity and had the nerve to improve it.

Men have grown rich during the last three or four years by wisely handling sheep, who knew nothing about pedigrees; but they knew what the market would take, nor cared a cent for any other characteristics and names of breeds or crosses. One class of farmers, however (and this is especially to be noted), have been more independent and progressive than the average sheep raisers. They have studied the demand and market characteristics for what are known as "spring lambs." This branch of sheep raising has largely increased during the last three years, and promises to continue. Present prices may not be maintained, perhaps, but at a much less price cannot be unprofitable if economically and intelligently followed.

The most successful sheep feeders are not actual sheep raisers; nor are they, as a rule, farmers in any sense of the word. They are, however, successful business men who know the sheep trade from a

commercial standpoint, and the best methods of handling the business. Of these methods, few sheep raisers have the least conception or knowledge. All our old methods and theories of profitable sheep raising have failed when brought to the tests of the last few years. As said above, more progressive and diversified systems have been alone profitable.

Meat has controlled the situation. But for this, sheep husbandry would have been for a time annihilated in the United States, and woolen clothing world, like silk, become a luxury for the wealthy. This state of things would not exist alone in this country, but in all industrious nations of the world. The old-time wool growers see no comfort in this, and remain stubbornly opposing the course of things and kicking the sheep that have come to stay. Some of them—quite a number of them, indeed—are kicking themselves for not sooner seeing what could be done, and are following in the line of progress and profitable sheep raising.

The signs of the times, the sheep markets of our cities, point the future American sheep raising as surely as does the cattle and hog market show where and what must be the future beef and pork raisers. Nor is there a well-taken point against the changes that have come to the sheep industry of this country. The facts are, the old way does not pay and the new ways do pay, and what pays must be done, and no one can show why the new should not prevail. Men have always been trying this and that way of doing things, and always find out by experience what is the best way, and are sure to continue in that way. This has been the rule in all human enterprises, and will continue to be as long as the world stands. Progress has always had to combat the prejudices and ignorance of men, and has always been successful. Sheep husbandry, like the rest of the world, never goes backwards.

The situation of the wool market is so peculiar to-day that no two men can agree as to the cause and remedy. It will work out by rational means and in due time, and by no other. Wool growers and wool dealers must wait for the solution of the question: "What ails the wool market?" One thing meets us from any point we look at the wool and woolen trade, that is its cheapness. Never were woolen goods so cheap as now. A suit of fairly good woolen goods for a man at eight and ten dollars. Just why and just how this can be, no one can satisfactorily explain. Even that hackneyed and inconsistent explanation of prices, "the McKinley bill," can't show good cause for prices of woolen goods to the average man. We accept it (the explanation), and believe it has done and will do far more good when fully tested.

There are no doubt many things within the reach of sheep men that can and must be done to make their business permanently profitable. What would help one man may not be a relief to all. It is much like raising wheat, corn and fruit—a natural adaptation of men, methods and conditions for each that no teacher can point out to the novice as absolutely safe to follow. Experience, skill and intelligence will be a safe guide to every man in every line of industry. Without these every man must plod on in distrust of his business. Fortunate, indeed, is the man who can so adapt himself to circumstances and changes and turn them to his advantage. Such demands are upon the sheep raisers, and they will meet the situation in the spirit of the age, and turn defeat into victory.

R. M. BELL.

SILOS AND ENSILAGE.

Many letters of inquiry have reached me, questions from Oregon, Missouri, Tennessee, New Jersey, Massachusetts and several from Indiana, and especially one man from Clay City, Indiana, who begs of some man to tell him all about the silo and how the stuff can be cut up and packed so it will not all rot. He wants it all at once. To commence with, let me say to Clay City, you can raise just as large a crop of ensilage corn on your soil there as I do here. Take good sod ground, as you usually do for field-corn, plow it good, harrow it fine, cross-harrow it finer, crush it or roll it, smash the lumps, plant the corn there with a drill planter, if you can get one, in rows, say three feet and eight inches apart, if you have a good, rich

piece of land; if that is too close for best field-corn there, make the rows from three feet ten inches to four feet apart, and drop the kernels from eight to twelve inches apart in the row. Just as the corn comes up, harrow the ground nicely lengthwise of the row, and kill all the grass or weeds that have started. Sometimes it is best to harrow again. I often do it twice, then cultivate between the rows as soon as the corn comes up high enough to see the rows plainly. Hoe it once and thin out if two or more stalks come close together. Cultivate it from three to five times and you will then have the hundred bushels of ears of corn I mentioned per acre; not shelled corn, but corn in the ear, thirty-five pounds to the bushel, and you will have from fifteen to twenty tons of the ensilage per acre on all your Clay City land if you do as I tell you.

You can use sweep horse-power, from two to ten horse-power, or tread horse-power, steam threshing-engine power of any kind, if you use the strong Ohio feed-cutter I named, and your ensilage will be cut up all right for winter feeding. You cannot do this silo filling with a hand-power cutter. In answer to all others let me say, ensilage to be good food must be grown to near full maturity. Oats, rye, clover, or any other crop is not as good for ensilage as corn, nor can you produce it as cheaply per ton. In all cases it must go into the silo wet or it will not pack good and tight. If hot, dry weather strikes you at this harvest time and the leaves and stalks are dry, you must pour on water or sprinkle on water so it will moisten the whole mass. You need not be afraid of hurting it by getting it too wet. The failures numerous ones have written me about, no doubt comes from the fact that the ensilage was not wet enough and they did not tread the sides and corners good enough.

I never shall advise filling silos with whole corn-stalks. We have tried it two winters, but it does not distribute the grain evenly. It is a devil of a job to cut it up in the winter time or get it out of the pits in any way or shape to feed, and the cattle have a big time pulling and hauling to get the ears of corn first before they will eat up the whole stalks. To fork out or pull out or get out of a pit from ten to fifteen feet deep, corn-stalks—wet, slimy, stringy stuff—begets the height of exasperation and greatest need for prayer.

Good, mature, sweet ensilage from field-corn or the large, white, southern corn, as I have described, will never injure the quality of butter or milk. It will not give it a bad flavor. No live man ever saw injured milk from this cause. If you make green, immature corn, finely grown, without any ears, into ensilage, you might have sour swill feed, good for nothing and that would impart bad flavor. To the Massachusetts inquirers let me say, don't hesitate a moment to adopt the silo for fear of hurting the quality of milk or butter.

Building lumber is put up in so many different forms in this country, that all your readers do not understand what I mean by planed and matched lumber for a silo ceiling or the floor of them. Any kind of wood will make a perfect silo. I only name pine because that lasts the longest in a wet condition a portion of the year. Build of any kind of wood you can get the easiest or cheapest in your locality. I say planed and matched and not over four inches wide. It must be smooth or the ensilage will not settle down easily or evenly. Matched lumber means tongued and grooved so it will join together and not spring apart. It must be narrow, because when the silos are empty the lumber will dry up and shrink, and if it is wide boards they will shrink out of the matching and then out of place.

You can have them in the first story of barns or other buildings, and use the earth for floor, or you can build them in second stories of your barns and have the whole of the first floor or basement for stable room. It does seem to me that if you will all read over the six articles on this subject I have written before, you will find nearly every question you have asked me in your special correspondence answered, except those pertaining to feed-cutters and powers to run them with, and the best places to buy seed-corn. These questions are hard to answer in a public way, because a customer in Oregon and

one in Massachusetts don't need to be sent to the same place for supplies. You can get all these things near home. I have taken the liberty to speak plainly about feed-cutters only, for I have seen so many frail and imperfect ones put out by manufacturers, that break almost every time you attempt the work that I mentioned. I gave the Ohio pattern as being one of the strongest and best I ever saw. I have written scores of letters to correspondents on some particular points, and as a rule all of such have sent a stamped envelope or postal card for reply. I have no idea that I can ever make this subject so plain that readers cannot think of some question to ask.

II. TALCOTT.

Ashland, Ohio.

QUESTIONS ABOUT CALIFORNIA.

I would like D. B. Wier, of California, to tell me (1) if a person can do any good there on \$1,000 or \$2,000. (2) Do people have to be rich to go in good society? (3) Do they have la grippe and colds there all winter? (4) What is unimproved land worth, (5) and what does it cost to improve it? (6) When people write up their part of the country they should tell all the drawbacks (7) as well as good qualities. E. L. R., of Lander, Wyoming, tells of the big prices they get for their produce, but don't tell how much they can raise per acre. (8) Is not Wyoming a pretty cold country? (9) The worst thing about this state is the changeable climate. Is there any government lands in California yet that are any account? (10) Are the farmers in a prosperous condition? (11) Is it a pleasant place to live in the country? (12) Are there good schools and churches in the country? (13) How does land rent, how much will it produce and what will the produce sell for? (14) Are dry goods and groceries high priced? (15) What is the most profitable business with small capital?

A. J. F.

Parrott, Ohio.

ANSWER:—(1) One can do as much here with that amount of money as anywhere on this continent.

(2) No; if a man is rich here he is liable to be sent to the legislature or the United States senate.

(3) Yes, it being epidemic at present on this continent.

(4) It is worth from \$2 to \$500 or more per acre, owing to location and value of improvements. Good farm land from \$5 to \$20 an acre, as per location and improvements. Here, \$25 to \$150; unimproved, from \$10 to \$250; near towns, much more. Good farms range in price from \$25 to \$250 an acre, owing to improvements. Good, unimproved fruit lands range in price about the same.

(5) The mass of our unimproved, best land here simply requires fencing and plowing. Rolling, hill and mountain land, the best for fruits, is more or less brushy.

(6) I have been unable to discover that we have any drawbacks in this county, which is located twenty-five to fifty miles directly north of San Francisco, except an overwet winter about once in forty years, preventing the planting of small grains.

(7) Yes, if one can get good land and grow good crops on it, and is in reach of a good market (mines, etc.), he has a nice thing. But how can he know that he can get such?

(8) Yes. Wyoming is a rough country, best adapted to mining and "steer punching," yet with fine chances for money in crops if you can strike the right place.

(9) Yes; some away back. There are yet millions of acres of government land in California, mostly mountainous or desert. There is plenty of good mountain land in this country that will soon be very valuable. It can only be had by homesteading.

(10) As a rule, there are those who are not; they have themselves to blame, however. But these are all joining the Alliance and Grange and the millennium is in sight, but they will never catch up with it. If we farmers could not growl and whine, we would soon be carried off with dry-rot.

(11) Yes; or, rather, I guess so; at least it is for me.

(12) None better, and plenty.

(13) It rents for one third the crop, delivered. Produce sells at San Francisco market prices, less 50 cents to \$1 per ton freight.

(14) Dry goods are a shade higher here

and groceries cheaper than east, except such as coal oil, oysters, etc., that have to be shipped here overland.

(15) Poultry, eggs, broilers, ducks, geese, and buying good, cheap land, planting fruits on it and taking right care of it, especially winter apples, in the best soil possible for them, in a climate refreshingly cool in summer and warm in winter; or planting orange groves and then selling them to the first tenderfoot that comes along for \$1,500 an acre, etc.

D. B. WIER.

BOOK-KEEPING ON THE FARM.

No one who has not noted the results can fully appreciate the value of book-keeping to the farmer and his family. He is not found complaining of hard times, because he discovers the small leaks and applies the remedy. He saves himself from embarrassment and his farm from the mortgage. His wife, keeping her accounts of receipts and expenditures for butter, eggs, poultry, dry goods, groceries, etc., acquires business knowledge and sagacity, and at her husband's death does not find it necessary to call in a stranger to act as administrator, who, like a leech, sucks the life blood from the estate—the joint earnings of husband, wife and children—and finally, with the aid of lawyers and court fees, perhaps leaves the wife and children in absolute want. No, her knowledge of business principles enables her to administer her own affairs.

The boy who is permitted to earn his spending money, and taught to keep his little accounts and compare receipts and expenditures, will the earlier learn the value of money and apply his wits to live within his income. Such a boy will not accumulate debts for his overworked father to pay; neither is he so likely to fall into fast company or fast living. He is educated for business, and will be able to hold his own in the battle of life.

The girl who has her allowance and is taught to make accounts, will appreciate the value of a dollar and use discretion in its expenditure. A young lady once told her lover, when he proposed, that although she loved him she would not marry him until he had ten thousand dollars. He was somewhat discouraged, but went to work to obtain the money and the girl. A few weeks later she inquired how he was succeeding. He replied: "Very well; I have saved seventeen dollars." "Well," replied the lady, "I expect that will be sufficient; we may as well get married." Did this lady know the value of a dollar?

We hear so much in this day about practical education. But practical education is that which practically fits boys and girls for the active duties of life, and any education which falls short of this is neither practical nor complete. Fit a child to earn a living and you do better by him than to give him wealth. Fit him to appreciate and care for property before he is safe to be entrusted with a legacy.

JOHN L. SHAWVER.

Logan county, Ohio.

THE COTTON PLANT.

According to good authority, the cotton plant was grown long before the Christian era. Many persons are under the impression that Cortes was the first discoverer of cotton, having found it in Yucatan in 1519. There seems to be some doubt as to this species of cotton being the same as that which was known to the ancient inhabitants of India. These people, according to the Encyclopedia Britannica, raised cotton as early as 500 B. C., and made clothing of it, too, at that remote period. India still produces cotton—something over a million bales a year—which is shipped to England and there manufactured. Still, a large portion of the cotton crop of the United States goes to England for manufacture also. American cotton is of a much better quality than the India cotton, and is used for making the finer classes of English cotton goods. The India cotton is used for coarse fabrics, and even then a good deal of American cotton is mixed with it to improve the texture.

Cotton was also raised in China 200 years B. C., though that country was never regarded as a source of supply for the staple. Central and South America and the West Indies, though now but little regarded as cotton-producing countries, formerly ranked high in this respect.

Cotton fabrics have long been known to the Peruvians. There is evidence that it

was successfully cultivated by them as early as 1532, or in the time of the Incas.

The West India or Sea Island cotton has the longest, silkdest staple, and it is of this variety sewing thread is mostly made. The cultivation of cotton in the West India islands, however, has been largely supplanted by sugar, which seems to be more profitable.

Brazil is a good cotton country, and much of the staple has been raised there for a number of years. Cotton is also raised in Italy, Australia, Cape of Good Hope, Natal, Fiji and Tahiti, but in small quantities compared with the production in the southern states of this country.

Cotton began to be raised in the United States, to a limited extent, as early as 1770, but it was not until after Eli Whitney got his cotton-gin on the market (about 1795) that cotton began to assume such large proportions as the king of southern agriculture. Whitney was poorly rewarded for his wonderful invention, however, as many another public benefactor has been.

DICK NAYLOR.

STOCK BARNS.

It is hoped that the era of big barns has passed. For twenty years we have been building immense structures of wood, stuffing them with hay and grain with the stock below it all. An overturned lantern, a smoker's match has changed many such a pile into a mass of seething flame so quickly that it seemed to be the result of explosion. The time is coming—may it hasten—when stock will be kept in barns where there is no hay, where there is nothing to burn like a tinder-box. If the stock barn in which there is no inflammable material catches on fire, the result cannot be so disastrous as before, for there is only the shell to burn. If this shell be of iron, as it may be at a moderate cost, there is absolute safety from fire.

For the protection and feeding of stock, unpretentious, low buildings, merely stables (two rows of stalls with a feeding space between), are just as good as larger structures. The only inconvenience is the bringing of the fodder from the stack outside, or from the hay barn. In winter these stalls are comfortable, for every farmer knows that every cow is as good as a stove and helps to heat the space. If the horses and all the stock (pigs in the cellar below) are under this low roof, between tight walls, all are as comfortable as they would be if tons of hay were piled above them, and they are safe from fire. And there can be no objection to the stacking of hay in the open air. Hay stacks on any farm, fine as it may be, give it always a picturesque and thrifty appearance. Probably less hay is lost in the stack than in the barn, for in the latter it often heats if not salted, and sometimes when it is salted.

If on a cold day hay be brought from a stack and placed in the mangers, the cows will turn at once from the barn hay to it. The hay is fresher, brighter from the stack, and is clean and dustless. Low stables for stock alone, practically fire-proof, cost comparatively little, and the farmer has the assurance that his stock is safe, or comparatively safe. These buildings may be snug in winter and cool in summer. The best stable of this kind was built with double walls with six inches of sand between.

GEORGE APPLETON.

When a solution containing a salt of an alkali (potash or ammonia) is placed in contact with common salt, a change takes place, the soil receiving something from the solution, and usually replacing this by some of its own parts.

Weak and Weary

Describes the conditions of many people debilitated by the warm weather, by disease, or overwork. Hood's Sarsaparilla is just the medicine needed to overcome that tired feeling, to purify and quicken the sluggish blood, and restore the lost appetite. If you need a good medicine be sure to try Hood's Sarsaparilla.

"I have been taking Hood's Sarsaparilla for the past three months with great benefit. My appetite is now good, the bad taste in my mouth has gone, and those tired feeling spells do not come over me as they used to." Mrs. I. B. CHASE, cor. Durfee and Cherry sts., Fall River, Mass.

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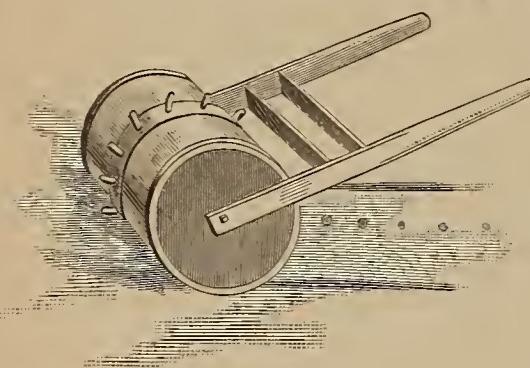
Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

AN IMPROVED DIBBER.—Chas. DeGroff, of Vineland, N. J., sends me a sketch and description of a roller dibber which is an improvement on mine, and which he has used this spring with entire success, for making the holes to receive the young plants.

"I first secured two empty cheese-boxes, twelve inches deep," he writes, "and drove one inside the other, then put a wooden hoop, or band, 1 inch wide and $\frac{3}{4}$ of an inch thick, on each end. The marks thus made serve as guides for returning on whatever side it may be, thus giving us a distance of twelve inches between the rows. I also put a similar band, four inches wide, in the center to firm or roll the ground where the pins are to make the holes. The straight pins, which I used first, raised the ground somewhat in revolving, and let it fall back, thus filling up many of the holes. To remedy this, the pins were made of the shape shown in accompanying sketch. These dibber-pins are about $1\frac{1}{2}$ inches long, $1\frac{1}{4}$ inches thick, not sharpened but rounded, as shown. This marker worked first-rate, leaving the holes open, and proved a wonderful labor saver. A simple frame completes the machine, and it is so made that I can put



AN IMPROVED DIBBER.

weights on it for the purpose of firming the ground as solid as I may wish." I only have to add that my friend's soil is probably the loose, white sand of central Jersey, and easily worked.

DRY WEATHER.—The drouth at this writing still continues. We have had a few light sprinklings since April, but not enough at any time to reach down into the ground more than an inch or so. At present the ground seems to be entirely dried out from the surface. Crops with deep-feeding roots, trees, shrubs, etc., stand this weather very well, for there is yet plenty of moisture in the depth of the soil; but the newly-planted seeds, the young plants, with roots yet near the surface, suffer terribly. The transplanted onion seedlings make little headway, and, unless rain comes soon, the crop will not come within sight of the boasted 2,000 bushels per acre. Well, the best of us are not proof against failure from accidents, and a spring drouth like this is only an accident, although of a rather disagreeable kind.

One of the great problems that we have to try to solve in a time like this, is how to insure the germination of seeds. I have planted Limas and sweet corn and vines of all kinds, but they are coming but slowly, simply because I depended too much on the coming of rain. We can make pretty sure of the prompt germination of coarse seed, such as corn and the like, and even finer ones, in dry weather, if we plow and prepare the ground only immediately before planting, so that we can deposit the seed into freshly-stirred, still moist soil. We may also plant somewhat deeper than we would in a moister time, and we certainly should firm the ground very thoroughly over the seed. I think good seed will seldom fail to germinate very promptly under these conditions. In a garden we cannot always have every little patch or corner we may wish to plant freshly plowed, but it is always preferable to do this when practicable. If we cannot plow, the soil should at least be stirred as deeply as possible by other means—by hand-plow, by cultivator, or hoe. There is little sense in plowing seeds into a dust-dry surface.

The same conditions necessary for the germination of seeds are also needed to insure success in planting out any kind of

plants. I seldom have much of this work to do, since I sow my lettuce, cabbage and cauliflower right where I want them to form heads. I use plenty of seed, and thin rather than transplant. Without considering tomatoes, peppers and egg-plants, celery is about the only vegetable that I have to set in open ground. Have just planted 550 White Plume celery plants. This, in the first week of June, is rather early; but I shall set more later on. On good soil we can raise good celery for winter, if set out as late as the middle or end of July. I am not usually very lavish in the use of water when setting out plants. If the soil is moist and the plants well grown and fresh, we can make almost every plant grow if we will only press the moist soil firmly about the roots of each plant when setting it. The roller dibber, described by friend DeGroff, would do good work for making the holes for celery in well-prepared, clean, loamy soil. In consideration of the prevailing terrible drouth, I have, for once, used plenty of water on the newly-set plants, and they now look as if they were all going to grow.

In this climate we cannot raise fine plants, such as I have just been setting, in the open ground by first week in June; and it almost seems to be cheaper to buy such plants when you can get them at \$1 for 500, than to start them under glass and transplant in nursery row afterwards. I am well satisfied with my investment, and propose to take good care of my plants, even if the drouth were to continue, and make frequent watering necessary.

While on the subject of watering, I will mention that Mr. McMellan, the park superintendent of Buffalo, is reported to set his men to watering plants, shrubs and trees in the park when it begins to rain; and there is a good deal of good, sound, common sense in this. Most of our rains wet the ground only to the depth of an inch or two. A watering in dry time will do no more.

But combine the two and the ground will be moistened down to twice that depth, and put the moisture where it will not be speedily evaporated by sun and air. A watering in a rainy time will often do real good, and be of lasting benefit, while in a dry time it may only be an aggravation.

SEED GERMINATION.—For some days I have carried in my pocket (with intention to plant it in a box or pot under glass) a curious bean, which, together with part of pod, was forwarded to me, through FARM AND FIRESIDE, from Mr. C. F. Dennis, of Tennessee, who states that last year some such beans were found in a sack of coffee, by a local merchant, and planted in his garden. The pods contain 14 to 15 beans, and are 12 to 14 inches long. The vine is beautiful when full of flowers or beans. Some years ago I had a number of the pods, full of seeds, sent me from Florida, with request to tell name and use. I sent some of them to several of our best authorities, but none of them could give me the desired information. Undoubtedly, the plant belongs to the Leguminosae, and I think is a Wistaria. The presence of the bean in a coffee-sack is a pretty good evidence that this bean is a product of the tropics. If I had the flower and leaves, I could probably find name, etc., easily enough. I will try to start the seed under glass and see what can be done with it.

Taking the bean out of my pocket today, I was reminded of the saying, that seeds start much more promptly after having been carried around for a week or so in one's pocket. There may be more than a mere notion about this. Moisture and ammonia, coming from the body, may have some favorable influence upon the germination. It is an old observation that the presence of ammonia, and probably of nitric acid also, as well as potash, hastens germination. Some seeds (especially of many trees) having a hard or bony covering, often are quite tardy in starting to grow, and occasionally the patience of the planter is sorely tried. Grape seeds having once become dry, will sometimes lie in the ground two years before they germinate, and so it is with many other seeds that have a hard covering. One way of insuring their prompt germination, is to preserve them in the pulp or fruit (the grape seeds in the berry) until wanted for planting; or, in other words,

to plant them immediately after they are freed from the surrounding pulp, or to plant them with the pulp surrounding them. But if the seeds have once been cleaned and become dry, germination may be hastened by soaking in water containing a little ammonia, or perhaps by burying them for a little while in fresh horse manure.

HOME-MADE WEEDING-HOE.

The weeding-hoe, of which I send you a drawing, is about the most complete thing for its special work that I ever used. I made it out of a piece of broken wagon-seat spring. The shank is a broken pitchfork tine. The hoe part is seven inches one way by one and three fourths inches the other, flat on the bottom, the bevel being on the top side, with the straight side forward, and sharp all around. It is essential that the points should be carried out, as they are very important in slipping betwixt a weed and a plant. Everyone who has used it exclaims: "I can't see why it had not been thought of before."

It is ready to cut in every direction, and can be slipped in against a weed where it would be impossible to get an ordinary hoe. The shank is bent about an inch and a half above the plate to an angle that it will lie flat upon the ground when a man stands straight. The handle is about the length of a common hoe handle, say four feet two or four inches, only it should be lighter, as I use mine very much with one hand. Lying flat as it does, it can be slid along under the soil about an inch deep, cutting everything in its path, besides loosening the top of the ground, so necessary to prevent undue evaporation.

Any blacksmith can make one, and I would not do without mine for ten times its cost.

THOMAS BUCKMAN.

Oregon.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

Budding the Orange and Lemon.—M. H., Selma, Md. Orange and lemon trees should be budded. If the plants you have were raised from seed, they will not flower until quite old, while if they are budded with the early-maturing orange, they will flower in a year or so. This operation is done in a manner similar to the budding of peach and apple trees so often described in these columns. The buds should come from a tree that you know bears flowers. They can be budded whenever they are growing freely. Budding is better than grafting for your purpose.

Wormy Apples.—A. T. P., Monticello, Ind. Your trouble is a common one, and to meet it, the growers that make the most money have found it very profitable to spray the foliage and fruit, as soon as the blossoms have fallen, with Paris green and water mixed, with one pound of the Paris green to one hundred and fifty gallons of water. This must be repeated if rain falls within a few days. At this early period in the life of an apple, it stands with the blossom end up, and the poison enters this end at this time without trouble. It is also the part of the fruit most subject to insect attacks. You should buy yourself a spray nozzle and pump, if you have even a dozen trees to save. It is rather late now for saving this year's crop. The wormy apples that fall should all be picked up and fed to hogs or deeply buried. This will decrease the crop of worms for next year.

Kerosene Emulsion—Insects for Name.—W. H., Cohoes, N. Y., writes: "I send you a leaf as taken from the bush after a moderate use of the kerosene emulsion; that is, one part



HOME-MADE WEEDING-HOE.

of kerosene to nine parts of water.—I want you to tell me in your next issue what are the proper names of the insects enclosed."

REPLY:—Kerosene emulsion is one of the most valuable insecticides known, but it must be properly made. There should always be enough soap used with the kerosene so that the emulsion will not be oily. If the kerosene is found in globules in the emulsion, it is a sure sign the emulsion is not properly made.

There are several recipes for making it, but I have used for six years an emulsion made by uniting two parts kerosene with one part soft soap, and then using one cup of the emulsion to a pail of water. If the kerosene and soap do not readily unite by stirring, they will if four parts of boiling water is added and it is then stirred. If used very strong, the emulsion, especially if not well made, will injure the foliage. Better add a little too much soap than not enough.—The insects enclosed were pressed all out of recognition. The leaf received had on it the remains of some plantlice (aphis), and also two very beneficial insects called soldier bugs. These latter are great fighters, and destroy lice, currant worms, cut-worms and other soft-bodied insects.

Snowy Tree Cricket.—M. B. M., Morgan, Ky., writes: "There is an insect which attacks my young apple and peach trees in the manner shown by twig enclosed. They are more active and destructive on the peach trees than the apple, at present writing. The trees have only been set out a year last fall. I lost about a dozen trees last year by this same pest. Is there any remedy to prevent them from attacking the trees? If so, what is it, and how should it be applied?"

REPLY:—The twigs received were injured by the snowy tree cricket, which had laid its eggs in them last autumn. The only known remedy is found in gathering the infested twigs in the winter and spring and burning them. I think your peach-trees are injured by the yellows or some other disease, because the eggs of the snowy tree cricket do not seem numerous enough to seriously injure the tree.

Peach-Leaf Curl—Quince Bloom Drop-
ping.—J. B., Bowie, Tex., writes: "What is the matter with my peach-trees? The leaves are full of knots and blisters, and they crumble up and fall from the trees. What will prevent it?—My quinces have shed their blossoms. What is the cause of their shedding, and what can I do to prevent it?"

REPLY:—Your peach-trees are affected with what is called peach-leaf curl. It is a fungus disease and is most abundant while the growth is young, and is especially prevalent on budded stock of the weaker varieties. It seldom appears on native seedlings of the strong-growing kinds. But little is known of the life history of the disease, but probably your best course will be to burn or bury all the diseased wood and foliage.—Do not know. It might have been due to dry, windy weather, to drouth or many other causes, and the trouble may be in the variety.

Plant-Lice on Plum-Trees.—S. B. P., Cautril, Iowa. You probably refer to some plant-llice (aphis). The best remedy for all pests of this sort is kerosene emulsion. It is better for many insects than Paris green, because while the latter must be eaten by the insects in order to be effective, the emulsion kills by simply coming in contact with their bodies. The Paris green, then, for sucking insects, is about useless, while for biting insects it is invaluable. It is a good remedy for currant worms and lice on all kinds of trees. It can be made as follows: Take two parts kerosene and one part soft soap (or dissolve hard soap in water until soft), and stir together until they unite. If they do not unite readily, add three parts of boiling water. This should be used in proportion of one half pail of the emulsion to a pail of water. Spray it on or dip the infested branches into a basin of it, as most convenient.

Brown Rot.—A. S., Lansing, Mich., writes: "Why did not our peach-trees bring fruit after blossoming nicely, the fruit clinging to the trees until half grown? What could we do to save the peaches this year?"

REPLY:—Your peaches were affected with what is called brown rot. It is a fungus disease which frequently attacks not only the peach, but also the cherry and plum. At this time there is probably nothing that can be done to save your peach crop this year, should the season be favorable for the growth of the fungus. If the weather should be dry and bright during the growth of the crop, you will not be much troubled; but if wet, you are liable to have a repetition of the same trouble. But little has been done thus far to combat this disease, but some experiments made seem to show that spraying the fruit about once in two weeks with a solution of four pounds of sulphate of iron, dissolved in six gallons of water, will have good effect. But prevention, rather than cure, must be the remedy for the trouble. All the dry plums (mummified) and dead twigs should be gathered as soon as the leaves have fallen and be either burned or buried. It is in the dry, lifeless-looking fruits that the spores of the disease pass the winter. There ought to be a co-operation among neighboring growers in this work, so that the negligence of one grower may not leave a center of contagion for another year.

Strawberries.—H. G., Piedmont, Mo., writes: "I have one quarter acre of Wilson's Mixed, etc., on quite thin, dry land. I wish to change them this fall or next spring for Miner, Windsor Chief, Warfield, etc. Can I plow up the patch after fruiting, and cultivate it so as to kill all the old Wilson's, that I may reset the ground this fall? Also, can I manure this thin land up sufficient for a next year's crop of berries by a liberal application of barn-yard manure and wood ashes this summer and fall, and by the use of nitrate of soda next spring? If so, how much of each should be applied?"

REPLY:—The method you propose is possible, but not a good way to do. Old strawberry beds are generally infested with the grub of the May beetle, the leaf-roller and crown-borer, besides many fungus diseases, and the loss from these troubles would probably be much more on an old bed that was immediately reset than where new, clean land was used. I have said it is a possible thing to do, and if attempted, the bed should be plowed at once, after the crop is gathered; the vines and weeds should be mowed and then burned on the bed; after putting on a covering of about ten bushels of wood ashes, the bed should be plowed under deeply, and in three or four weeks should be cross plowed and dragged several times. It should soon after have a dressing of about three cords of well-rotted stable manure plowed in. Even with such thorough treatment as this, if the season is dry, it may not be in the best of condition for planting; but if the season is wet, it would probably raise good strawberries from plants set in the fall. Probably you could use in the spring thirty pounds per acre of nitrate of soda on your bed to good advantage.

EXTRACTS
FROM CORRESPONDENCE.

FROM TENNESSEE.—Hamilton county ranks as one of the foremost counties in this state for education. The price of land is increasing very rapidly here. Land sells for from \$10 to \$20 per acre near the railroad or town. This is upland. Bottom land sells in proportion; good land, high price; poor land, low price.

Trenton, Tenn.

E. H.

FROM FLORIDA.—In your issue of May 15th is an article on "sisal hemp." I have been for years trying to induce parties with sufficient capital to enter into this profitable industry. I have also invented a machine to clean the fiber economically and perfectly. But I can interest no one in the matter. Capital don't seek useful fields as a producer; as an absorber it seeks safe refuge in mortgages at ten and twelve per cent, with a sheriff's guarantee. This country, with an intelligent system of finance, could not only supply all the sisal fiber, but lead the world to a better civilization than we now have.

F. H.

Venice, Fla.

FROM MISSOURI.—South-western Missouri is a timbered, rough, mountainous country, especially Shannon, Howell, Douglas and Ozark counties. We have good water, good climate and good health. I have lived in Shannon and Howell counties five years. During that time farmers have not raised more than half a crop in any year. Fruit does well here if well cared for. Lumbering is the main business carried on. There are some railroad ties made here. It is not a good stock country nor ever will be; there is not enough tillable land to raise feed for stock through the winter.

Bartlett, Mo.

O. K.

FROM MISSOURI.—Pulaski county has many good qualities, and, like all other countries, has its drawbacks. Land is cheap, ranging from \$3 to \$20 per acre. The land in the valley is very productive, but there is a great amount of what is known as ridge land, which is too rocky for cultivation. This is not a waste, as fine timber grows there, and the entire stock of the country graze and fatten on these lands during the summer. Cattle raising has been our chief industry, but prices have been very discouraging. The raising of mules is at present receiving considerable attention. There is a good demand for them. They are shipped principally to the South.

W. A. P.

Hancock, Mo.

FROM OREGON.—Washington county is one of the oldest and best located counties of the Willamette valley. Everything grown in the states does well here except corn, which is raised in small quantities. Wheat, oats, fruit and vegetables all do better than the average here. This is a good stock country. Sometimes cattle are wintered in the fields and woods without any other feed than grass and brush. The greatest attraction here is the mildness of the climate and the absence of storms, cyclones, blizzards and violent lightning. No potato bugs, cutworms, cabbage or currant worms. It has been the boast of western Oregon for forty years that crops never fail in Oregon. Immigrants are rapidly settling up the remaining tracts of government land along the foothills of the Coast Range mountains.

A. N. A.

Greenville, Oregon.

FROM CALIFORNIA.—By reference to the "Peerless Atlas of the World," published by FARM AND FIRESIDE, your readers will see that Shasta county is located in the north central part of the state, and that the Southern Pacific railroad and the great Sacramento river wind through the county. Farmers are cutting volunteer hay crops, worth \$8 per ton in the stack. Wheat, oats, barley and rye stand thick and heavy on the ground, are of good color and promise good crops. No failure has ever been known in Cottonwood valley. Strawberry season is about over, though certain varieties ripen here every month in the year. Cultivated flowers in yards bloom the year around. Ripe cherries are abundant. Mulberries are ripe. Twenty mulberry trees around our house, planted three years ago, are twenty feet high. This part of the state gets all the natural rainfall necessary. We have never had a boom here; hence, land is very low in price—from \$10 to \$30 per acre.

M. G. Cottonwood, Cal.

FROM NEBRASKA.—Buffalo county is adapted to farming and grazing. The soil cannot be overestimated as to the value of its production. Land is cheap here, considering the quality—price from \$8 to \$25 per acre. Rolling prairie is the cheapest. Improved bottom farms on streams with wood, such as box elder, ash in abundance, \$25 per acre. A great many eggs are shipped out of this country, prices being 12½ cents per dozen. Cattle and horses are cheap. There are no sheep here. A great many hogs are raised here, and sold at the Omaha market. Crops look well; the prospects were never better. We expect good prices for all our products this coming year. Any one wishing good farm land would do well to look at this part of the country before buying. There is a mill site here, awaiting some one to invest. There

is a dam and a fall of fourteen feet. Come on, millers, and build a mill in this great grain belt. This power is good, and the country will support a mill of one hundred barrels capacity. Nebraska is capable of growing beets and making sugar and syrup. She grows more wheat, oats and corn, feeds more cattle and hogs than any other state of the same size in the Union. She also produces a large amount of flax for linseed oil and oil cake. Her grass is not duplicated in any other state, so far as wild grass is concerned. Wild geese, ducks and prairie chickens are very abundant. A man can buy a farm here for \$10 per acre, and he can, on the same land, grow from twelve to twenty-five bushels of wheat to the acre, and from forty-five to seventy-five bushels of corn. This looks almost like paying for a farm the first year.

Sweetwater, Neb.

H. A. B.

FROM MISSOURI.—Howell county is on the southern slope of the Ozarks, and is the best fruit-growing district in Missouri. Apples, peaches, pears and the small fruits grow to perfection. The Olden fruit farm has growing 13,000 apple-trees, 50,000 peach-trees and 30 acres of small fruit. Other large orchards are being planted along the line of the railroad. We have a red clay subsoil that is especially good for fruit growing. Trees are thrifty and bear young. We have an excellent climate, very little wind, no blizzards, and mild winters. The county has a population of 21,000 people. This is a timbered country. West Plains, the county-seat, is a neatly-built town of 2,200 people, seven churches, three public school-buildings, one college and four newspapers. It is located on the Kansas City, Springfield and Memphis railroad, 111 miles south-east of Springfield. Unimproved land can be had at from \$3 to \$5 an acre; improved farms from \$10 to \$30 an acre. Grass and vegetables do well.

West Plains, Mo.

J. A. T.

FROM MICHIGAN.—In the report of the department the question is asked: "Is our public land all taken up?" Then we are cited to the fact that the arid area is still obtainable in a large degree. Right here let me say that there are thousands of acres of government land in Michigan, Wisconsin and Minnesota, some of which is excellent land and covered with a luxuriant growth of timber. This is not of the arid area, but only awaits the settler's ax to yield a reward, which depends on the settler himself as to its bountifulness. Again, there are thousands of acres of good land here in Michigan held by the railroads, which, if the land were opened to settlement, would soon be under a state of cultivation. The railroads, however, are able to hold this land for higher prices, and in anticipation of a raise, have fixed the value of the land at about \$12.50 per acre, at which price the sales are exceedingly few; consequently, few settlers occupy these alternate sections; neighbors are too far apart to associate much, and the country is backward, and held back by the combination that the Alliances and Granges are fighting.

M. D. J.

Bellaire, Mich.

FROM IOWA.—Jackson county, in the eastern part of the state, is very fertile. We have never known a failure of crops. We produce corn, oats, rye, some spring wheat and potatoes; in fact, everything that is raised in a similar latitude. Maquoketa, our county-seat, is one of the prettiest cities in the state. It has a population of 3,500. Lime-burning is one of the city's largest industries. It gives employment to about 100 hands, and turns out over 1,000 barrels of the finest white lime per day. Our people are sociable, generous and warm-hearted, ready to receive and welcome bona fide settlers who come here to improve the many advantages we enjoy. Taxes are nominal and the county almost out of debt. Our educational advantages are excellent. Water is abundant and good. The northern part of the county is well timbered with different species of oak, maple (hard and soft), wild cherry, basswood, walnut and hickory. There is plenty of good land in the county, that can be bought for \$8 to \$25 per acre, that would make splendid farms if cleared up, and these lands lie convenient to good markets. There is an abundance of wild fruit, such as plums, grapes, blackberries, raspberries, dewberries, gooseberries, currants, etc. Our winters have been mild of late years, and cattle find their own living from April till Christmas. Jackson county is certainly a paradise for a poor man with a little ambition.

J. K.

Monmouth, Iowa.

FROM CALIFORNIA.—Ventura county is the fourth north of the Mexico line, and borders on the Pacific coast. San Bueno Ventura is the county-seat and has about 2,500 inhabitants. It is situated at the mouth of the Ventura river on the shore of the great Pacific ocean. She has four large warehouses, where wheat, barley, beans and other products are stored for shipment by water to eastern and foreign countries. South-east of Ventura is the great Santa Clara valley, where the Lima bean is planted by the thousands of acres. It is considered one of the most productive valleys in southern California. Not only the Lima bean is grown here with success, but the apple, apricot, peach, lime, lemon and orange. Nearly all kinds of fruits are grown here in abundance, and bring large profits to the producers. Farmers grow rich from year to year.

It is estimated that about 400,000 sacks of barley will be threshed this season, besides the barley that is already cut for hay. It is claimed that this county and Santa Barbara raise the best English walnuts in the United States. North of the valley the country is very hilly and mountainous. It was used for grazing purposes until about three years ago, but is now proving to be the best fruit and vineyard land in the country. These lands are comparatively cheap for California. They are worth from \$20 to \$75 an acre. The winters are very mild. We fear no injury from frost, and we seldom have it cold enough to freeze ice. We have our rains from November to May. We raise all kinds of crops in the summer without irrigation by thoroughly cultivating the soil in the early part of the spring. This sounds strange, but it is so. The writer has seen one hundred bushels of corn grown per acre and one ton of Lima beans per acre without a single drop of rain from the time they were planted until they were put in the bin. All kinds of flowers grow the year around, such as the rose, geranium and calla lily, that grow in hot-houses in the East. Best of all, health is almost perfection.

E. B.

Saline, Cal.

FROM MONTANA.—Gallatin county is as good as the best. Our soil is very rich, both along the mountains and on the river bottoms. Wheat, oats, barley and grasses of all kinds grow finely and produce large crops. We get large yields and have a never-failing market. The market is increasing faster than our products, as our good land is most all now in cultivation and our mineral resources are just now fairly in process of development. For one who wants to farm and raise wheat, oats, barley and potatoes, and have a good market for them all at a good price, this is just the place. I have lived here for twenty-six years; I have not grown rich but have a good, comfortable home. We have not had a total failure of crops in twenty-five years. That is certainly good enough. As for society, ours is just as good as any, as we have good people from all over the United States. Churches of most kinds are located throughout the valley. Our schools are good. Our state is full of minerals of most kinds; big, rich strikes are being made all the time. For those who want to farm, Gallatin county is the place, and those who want to mine, Montana is the place.

A. T. H.

Belgrade, Mont.

FROM KANSAS.—I was pleased to read the sensible article in FARM AND FIRESIDE by J. W. B., Wells, Iowa. I presume there are many more like him, but they have a way of not being often heard or seen. I, too, am a farmer (with an ax to grind), and would like to see better times—namely, more money and less work. But we will never have it, save by labor and true economy. The legislature can help us a great deal, but only those who truly learn to help themselves will gain in the end. I am considered something of a cynic by my neighbors for advancing the doctrine that the farmers are the farmer's worst enemies. Raising inferior stock and food, selling at forced prices for money to either gratify a whim or pay interest on some bad investment. We cannot all be great and rich, and the more we spend in that kind of speculation, the less we will have. But plenty there is in reach for all. With hard times came failure of crops with us; but others besides myself have lifted the indebtedness on the farm and have some little left. But it was not done by wasting. I know of a few farmers who waste more each year than I make, and some of them have reached the end of the string, and are loudly calling for more money. If we lay aside pride and speculation and practice true economy, it is surprising how little money we actually need to live comfortably. Politics are all right in their place, but when I see farmers going to the parades and numerous meetings of this new order, and their wives at home chopping their own wood, and in some instances hauling feed in the snow for the cattle, then I think that wealth, like charity, begins at home.

Emporia, Kan.

J. E. H.

FROM CALIFORNIA.—Sonoma county is a large county—one hundred miles long by forty to fifty wide. The north-western one fourth is all hills or low mountains, more or less timbered, and in a large part covered with the finest of lumber trees, the grand redwood (*Sequoia sempervirens*), which make lumber cheap and plenty. There are two ranges of low, rich mountains on the south-east side of the county, between which is the beautiful Sonoma valley, which, including foothills, is from one to five miles wide and fifteen miles long. It is a rich, warm-sheltered valley, the home of the grape and every other fruit, from the orange to the apple. On this side of Sonoma mountain—2,400 feet high—we have first, this city, Petaluma, ten miles from San Pablo bay, thirty miles north from San Francisco, and at the head of navigation on Petaluma river. Petaluma valley is about twenty miles long by ten wide, with low, smooth, rounded, rich, sandy loam hills, twenty-five miles west to the ocean; the particular home of the apple, cherry, plum and prune, potatoes, wheat, dairying, small fruits, vegetables and poultry. It is cool in summer and warm in winter. Then ten miles to the north, over a low, broad divide, we enter Santa Rosa valley; then six miles further the beautiful little city of roses, which gives name to

the valley. This valley has a peculiarly fine climate, a charming mixture of sea-breeze and warm, bright sun from blue skies. Then on up west of north sixteen miles, we have the thriving little city of Healdsburg, the center of a fine fruit, hop, wine and farming country, in the Russian river valley. Then twenty-two miles further north we come to Cloverdale, in the same valley; thus giving a stretch of the richest of valley land, practically stretching from San Pablo bay to Cloverdale, nearly one hundred miles long by from three to fifteen miles wide, flanked by foothills and tablelands on either side. There, nothing can surpass for health, climate, fruit and vines. As we go north the valleys are warmer in summer. At Healdsburg, Dry Creek valley, and on up to Cloverdale, it is quite hot at midday and afternoons in midsummer, yet the nights are always cool and refreshing. Beginning eight miles west of here and extending on up to Cloverdale, on the west side of the valley, in the fine sandy loam, is the great peach belt of the county. It is also fine for all other fruits, with plenty of canneries and dry-houses and cheap freights to the city. Branching off from the great central valley are many lateral valleys and high mountain valleys. In the mountains on both sides there is a large amount of government land for homesteading, that will some day be very valuable. There is room for thousands of free mountain homes in one of the finest climates of the world. We have rains from five to six months in the year. If we could have our choice, we would have no rain from May 20th to November 1st. All rains between these dates cause loss and do no good, only harm. We usually have very little rain for five months. A rain on May 29th wet thousands of tons of hay, injured our cherries some, and caused an immense amount of extra work and did no good whatever. I may say roughly, that our highest thermometer is 110°, and lowest 18°. It is true that these are rare extremes, and local. That degree, if cold, injures scarcely anything, for the reason that it is always wet and densely cloudy when cold. Snow seldom whitens the ground or lays, except above 1,500 feet. The orange and magnolia trees will live and thrive in any portion of the country. Roses and geraniums are in bloom here in Petaluma every day in the year, in the open garden, and with less frost from 400 to 1,500 feet up than here. Poultry prices: Hens range from \$6 to \$9 and roosters from \$4 to \$8 a dozen, eggs from 15 cents to 60 cents a dozen. This town is the great poultry center of the coast. Land prices range from free homesteads to \$200 and \$500 per acre near Santa Rosa and other cities, or \$10 to \$100 as per location, quality and improvements, a few miles back.

D. B. W.

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THE CITY OF SILENCE.

BY HARVEY HOWARD.

It is just the sweetest city!
Yet sometimes I think we pity
Those who dwell within those pretty
White dwellings on the hill.
It is so peaceful, pleasant
And fair to dwellers present;
And the partridge and the pheasant
Feel no fear, it is so still.

Its walls are low and narrow,
And the linnet and the sparrow
Make the only music there. Oh!
So silent are its homes!
Never has its doors a rover;
Myrtle green and reddest clover
Grow in wreathed profusion over
Its many earthen domes.

Here are found no wreaths of laurel,
None of bitter rue and sorrel;
Never comes the sound of quarrel
In these quaint and vacant ways.
No sound of stately masses,
Nor of any praising, passes
Upward through the growing grasses
All the moveless, voiceless days.

Men from other cities wander,
Other home ties sometime sunder;
Not so in the white town yonder
On the wide-browed hill.
Not a shadow of returning,
Not a jot of fear or yearning
In the dwellers' bosoms burning,
Ever came, or ever will.

O Peace so pure and tender!
So wrapped about in splendor,
So needless of defender
Or champion or aid.
Each life must have its knelling;
Some day he who is telling
Shall come and claim a dwelling
Among your resting dead.

THE CALICO FROCK.

It wasn't a hot day, nor a cold day, nor a damp day, but it was an atrocious day, a clammy day, an unbearable day, a day that made your clothes stick to you like poor relations, that brought out cold sweats on pitchers and goblets, that made your back a race-course for contemptible little chills and the rest of your body a target for a thousand invisible pins and needles, that made the grasshopper a burden and the dusty, begrimed city a pandemonium, that made Solomon Griggs, bachelor, of the firm of Griggs, Makem & Co., the great clothing merchants, shut up his ledger with a bang and start for the country by the next train, remarking to old Griniseby, the head clerk, "that the city was stifling."

To which that worthy replied:

"So it is, but how about the fellers that can't get out of it and must stay to be choked?"

A problem which, I suspect, our friend of the firm of Griggs, Makem & Co. troubled his head very little about, being just then busy in looking into the dusty recesses of that picture gallery, which memory furnishes and arranges for us all as a single landscape, hanging there.

A low house with mossy, overhanging eaves, standing on the slope of a green hill, shaded by branching elms, with level fields stretching off in the foreground toward the sparkling water on one side and dusky woods on the other, and there, dusty, sweating and tired, Solomon found himself just about sunset. Out came a ruddy-cheeked, smiling old lady in a cap and apron that had attained a state of snowy perfection unknown to city laundresses.

"Why, bless me, if it isn't little Sol! Why, who'd a thought of seeing you?" and she folded the stalwart, bearded man in as warm an embrace as though he were in reality still the little Sol of former days. "And how do you do, Sol? Come in, come in; don't stand out there. You know the little path and the way to the pantry yet, I dare say. Come in; you needn't start back. It's only Rachel."

"But I didn't know you had any young ladies with you, Aunt Hester."

"It's only Rachel, I tell you—Rachel Hart, the seamstress. Are there no women in your city that you are afraid to face a little country girl?"

"Little, indeed," thought Solomon, as he acknowledged his aunt's somewhat peculiar introduction—and not pretty, either—with large eyes of that uncertain gray that sometimes beams darkly blue and then deepens into brown, with smooth, low forehead and light brown hair drawn tightly across each ear, just revealing its crimson tip; a face irregularly featured, and rendered still more striking by the singular contrast between its extreme pallor and the intensely scarlet lips—the personification of neatness, the embodiment of reserve.

"An odd little person," thought Solomon, "but it's none of my business."

Dismissing her from his mind, he proceeded to the much more important business of making himself perceptible at Aunt Hester's tea-table.

Solomon did ample justice to the snowy bread, golden butter and luscious strawberries, and later, as that worthy was indulging in a stroll across the field, he lifted up his eyes and beheld the little seamstress, whose existence he had quite forgotten, under a ven-

erable cherry tree, making desperate efforts to seize a tempting branch on its lowest bough, revealing in her gyrations a very neat foot and ankle, and looking almost pretty with her flushed cheeks and sparkling eyes.

Now, Sol was a gallant man—decidedly the preux chevalier of the firm of Griggs, Makem & Co.; so that whenever, as had once or twice happened, a petticoat ventured into the mouldy shades of the establishment, Sol was the man whom destiny and the other partners selected to parley with the enemy.

Advancing, therefore, with a happy mixture of confidence and condescension, Sol plucked the cherries and was about to present them, when Independence in a calico frock stepped back with a cool:

"Keep them yourself, sir; I don't care for them."

"I thought that you wanted them," stammered Sol.

"So I did, because they were difficult to obtain; had they been on your aunt's table I would not have touched them. It is the glow of triumph that gives a pleasure to its zest. Eat the cherries yourself, and good evening sir!"

"Stop a moment!" said Sol, not a little astonished; "that is—I mean—permit me to accompany you."

"No; you would expect me to entertain you, and that would be too much trouble."

"But if, instead, I should entertain you?"

"You cannot."

"Why?"

"You could tell me nothing new. You are only a crucible for converting bales of cloth into the precious ore that all the world goes mad after. No doubt you are all very well in your way, but there are alchemists who could transmute our hum-drum, daily life into golden verse or heavenly thought. To such a one I might listen, but you and I have nothing in common."

"Not even our humanity?" asked Sol.

The stern face of the young girl softened a little, but only for a moment.

"No," she answered angrily, "not even that. I, you know, am made of the inferior clay, you of the pure porcelain. Do you not remember how even good, kind Aunt Hester told you there were no young ladies with her, only the seamstress? You are slightly bored already and think me odd enough to amuse you for awhile, but if some of those gay ladies—among whom I hear you are such a favorite—were to come here, you would not even know me. Good evening, sir."

"What a furious little radical!" thought Sol, with an uneasy laugh, as he watched her retreating figure.

After all, he was not quite sure that she had not spoken the truth. If the calico frock had been a flounced silk, for instance, how many degrees more deferential would have been his manner in presenting the cherries?

Query the secound.

If the calico frock had been walking down Broadway about four o'clock in the afternoon, would he, Solomon Griggs, of Griggs, Makem & Co., as willingly escort it as across those green fields, where, if the robins and bluebirds did make remarks, it was in their own language?

Sol couldn't answer the questions satisfactorily, but he went to bed and dreamed all night of the little Diogenes in her calico frock.

That week and the next he waited patiently for the first glimpse of that remarkable garment coming around the corner, but in vain. And when, in such a very careless manner that it was quite remarkable, he wondered audibly "where that odd little girl lived whom he saw on the eve of his arrival," Aunt Hester answered drily:

"Away up—thereabouts," pointing with her hand.

She boarded, she believed, with some queer sort of folks there; though, for that matter, she was queer enough herself. And this was absolutely all she would say on the subject.

The next day Sol took it upon himself to wander up that way, "thereabouts," and was rewarded with a glimpse of the calico frock going through a broken gate, and, following it closely, came up with the wearer as she was about to enter the dilapidated front door, at which piece of impertinence she was so much incensed as to turn very red, while tears actually started to her eyes.

"What do you want?" she inquired, sharply enough.

"To see you," replied Sol, who, taken by surprise, could think of nothing but the truth.

"Well, you have seen me; now go!"

"But it's a warm day, and I am very tired."

"I can't help that. It's not my fault, is it?"

"You might ask me to walk in and sit down, if you were not as hard-hearted as a Huron."

"This is not my house."

"You would, then, if it were?"

"I don't say that."

"Well, then, I am thirsty; give me a glass of water."

"There is the well, and an iron cup fastened to it by a chain; help yourself."

"You inhospitable little misanthrope!"

But she was gone; and the next time he inquired for her, Aunt Hester told him, with a malicious twinkle of the eye, that she had gone to the city to find work.

Perhaps the good soul had been troubled with visions of a future Mrs. Griggs, and was not altogether displeased that an insurmount-

able harrier was placed between "that odd Rachel Hart and her nephew Sol, who was a good boy, but didn't know the ways of women."

Be that as it may, her joy was shortly turned into mourning, for Solomon received despatches requiring his immediate presence in the city. At least so he said, for Aunt Hester was immovable in her conviction that "that Rachel was somehow at the bottom of it." She even hinted as much to Sol when he bade her good-by; but he only laughed and told her to take care of herself.

After all, business could not have been so very pressing, as he spent the greater portion of his time wandering through lanes and back streets, not unfrequently dashing down alleys with the inexplicable exclamation of "That's her!" from whence he always returned very red in the face and sheepish in expression.

Three months had passed away, when he nearly ran against a little woman, who looked up in his face with a sardonic smile.

"Your eyesight is not so good in the city, Mr. Griggs. You don't know me here."

"Rachel—Miss Hart, I have been looking for you everywhere. I—where do you live?"

She hesitated a moment, then said shortly:

"Come and see."

Turning, she led the way through narrow streets, reeking with filth and teeming with a wretched population, up a flight of broken stairs, into a dingy little room whose only redeeming feature was its perfect cleanness.

"Will you be seated, Mr. Griggs?" she asked, with a scornful smile. "Now that you know my residence, I trust to have the pleasure of seeing you frequently."

"Aud you live in this den?" asked Solomon, heedless of her sarcasm. "How do you support yourself?"

"By my needle."

"How much does it take to keep up this magnificent style of living?"

"By unremitting exertion I can earn two dollars a week."

"Great heaven! Why didn't you come to me?" he asked.

"For two excellent reasons: First, I should not have known where to have found you; secondly, I should not have come if I had."

"Of course not. Your pride is to you meat and drink. Still, you might have come. We are in need of hands."

"I do not believe it. You wish to cheat me into accepting alms."

"There is our advertisement; read for yourself!" pulling a paper from his pocket.

The sunken eyes gleamed eagerly. She was human after all, and was even then suffering the pangs of hunger.

"Mr. Griggs, I believe you are a good man," she said, bursting into tears. "I will work for you gladly. I am starving."

And she did work, early and late, in spite of Solomon's entreaties, refusing to accept anything but her wages, declining to receive his visits, sending back his gifts, steadily refusing above all to become his wife, though she had softened wonderfully towards him.

"You are rich—I am poor!" she said in reply to his passionate arguments. "You are handsome—I am ugly; the world would laugh and your family he justly offended."

"I have no family, and as for the world, let it laugh; I dare be happy in spite of it."

"I will not have you."

"Do you not love me?"

"I will not have you;" and with that answer Solomon was obliged to rest contented.

Time passed on. A financial crisis came, and, with hundreds of others, down went the house of Griggs, Makem & Co.

Solomon sat in his office gloomily brooding over his ruin, gloomily thinking of the woman whose love he had so long and fruitlessly striven to win, darkly wondering if it were not better to cut short an aimless, hopeless, blighted life. In the little drawer on the right lay a brace of pistols, a present from young Makem when he went to California. Sol took them out—they were loaded—it was but to raise them so, adjust the trigger so, and—

"Lady wants to see you, sir."

"Can't see her. What can a woman want here? Shut the door! If any one calls, say I'm out."

Once more he took up the pistol, but this time it dropped from his nerveless hand, for a pair of arms were around his neck and two clear, gray eyes looked lovingly in his, while the voice that was sweetest to him whispered softly:

"When you were rich I rejected you. Now that you are poor I come to ask you if you will take me?"

And Solomon, like a sensible man, put up the pistols and took the calico frock instead.

A DEEP OIL WELL.

The Wheeling Development Company, composed of local manufacturers, who are anxious to discover natural gas in the vicinity of Wheeling, W. Va., have drilled a well 4,108 feet deep on Boggs run, a mile out of town. The drilling had been abandoned, but it will be resumed and the hole punched on down till a depth of 5,280 feet, or one mile, is reached. This will be the deepest well in the United States, and will pass through the corniferous rock under which all oil and gas in Canada is located. The United States Geological Survey has decided to assist in hearing the expense for the sake of being permitted to procure samples of the strata passed through.—*Cincinnati Commercial-Gazette.*

WHY SOME MEN DO NOT SUCCEED.

Two of the most successful men on the North American continent were recently asked the question: "What are the causes of poverty?" One replied, "Ignorance and incapacity." The other said that the prevalent cause is: "The number of young men who are wanting in decision and fixity of purpose. If they get into a good place at the start, they should stick to it, knowing that by perseverance, industry and ability, they win promotion in due course as vacancies occur. But they see or hear of some one making a fortune in Wall street, or in ranching, or in mining, and away they go to try their luck. When they lose, as they do in ninety-nine cases out of a hundred, that is the end of them; they can never settle down to ordinary ways of earning a living after that, and their descent is rapid." This reason hits the nail square on the head. Go where we will, we find men who commenced life under the most favorable circumstances, but who are such complete financial wrecks that there is but little hope for their reformation. They may be honest and temperate; they may even possess natural ability of a high order, but lacking in steadiness of purpose, they will never succeed. Had they sufficient will force to stick to 'oue thing, no matter how disagreeable it might be at first, were they content to advance slowly, they would have no reason now to talk of the "luck" of those who have pushed forward into the front ranks.

Another cause of poverty is a lack of self-confidence. Many men seem to have no faith in themselves, consequently no assertiveness, no independence, no pluck and no push. They are afraid to stand up and speak for themselves, preferring to lean on others. They are afraid to make an investment, because of the possibility of failure; they are afraid to tell what they can do, as they might make an error in doing it; they are cowards in every sense of the word. This is often the result of early training. A hoy, naturally timid, is kept in the background so persistently, and his mistakes are so severely criticised, that he grows up into an entirely useless man. Push and fixity of purpose will always bring a measure of success.—*The St. Louis Miller.*

IN CASE OF FIRE.

Fire requires air; therefore, on its appearance, every effort should be made to exclude air. Shut all doors and windows. By this means fire may be confined to a single room for a sufficient period to enable all the inmates to be aroused and escape; but if the doors and windows are thrown open, the fanning of the wind and the draught will instantly cause the flames to increase with extraordinary rapidity. It must not be forgotten that the most precious moments are at the commencement of a fire, and not a single second of time should be lost in tackling it. In a room, a table-cloth can be so used as to smother a large sheet of flame, and a cushion may serve to beat it out; a coat or anything similar may be used with an equally successful result. The great point is presence of mind—calmness in danger—action guided by reason and thought. In all large houses, buckets of water should be placed on every landing, a little salt being put in the water. Always endeavor to attack the bed of a fire; if you cannot extinguish a fire, shut the window, and be sure to shut the door when making good your retreat. A wet silk handkerchief tied over the eyes and nose will make breathing possible in the midst of much smoke, and a blanket wetted and wrapped around the body will enable a person to pass through a sheet of flame in comparative safety.—*Outward Bound.*

SILHOUETTE'S ECONOMIES.

Stephen de Silhouette, a French writer, became comptroller general of the finances somewhere in the middle of the last century. Already he perceived the direful cloud hanging over France, and tried to avert the tragedy to come by schemes of reform and economy, which Louis XV and his extravagant court turned into ridicule. Silhouette's name became very popular, and was appended to everything. The courtiers, pretending to be economical, discarded their costly snuff-boxes of gold and enamel for plain wooden boxes. To the same end, the men wore coats very short, sometimes made without sleeves; and instead of exquisite portraits set in gilt frames, or miniatures hung from gold chains and set in diamonds, they gravely presented to their friends funny little outline portraits, black profiles drawn in solid black, or cut with scissors from black cloth or paper. All these absurd fashions they called the "Silhouette style"—everything was *a la Silhouette* while the fun lasted. This was not very

THE FLOWERS KEEPING TIME.

The hour at which each flower opens is itself so uniform that, by watching them, floral clocks of sufficient accuracy can be arranged. Father Kircher had dreamed of it, but vaguely and without pointing out anything; it is to Linnaeus that we must ascribe the ingenious idea of indicating all the hours by the time at which plants open or shut their corollas. The Swedish botanist had created a flower clock for the climate which he inhabited; but, as in our latitudes a more brilliant and radiant dawn makes the flowers earlier, Lamarck was obliged to construct for France another clock, which is a little in advance of the Swedish one. We quote from Pouchet:

HOURS AT WHICH FLOWERS OPEN. PLANTS ON WHICH THE FLOWERS OPEN. OBSERVATIONS WERE MADE.

3 to 5 o'clock,	Tragopogon pratense (yellow goats-beard or salsify.)
4 to 5 "	Cichorium Intybus (chicory.)
5 "	Sonchus oleraceus (sow-thistle.)
5 to 6 "	Leontodon Taraxacum (daudelion.)
6 "	Hieracium umbellatum (umbellate hawkweed.)
6 to 7 "	Hieracium murorum (wall hawkweed.)
7 "	Lactuca sativa (lettuce.)
7 "	Nymphaea alba (white water lily.)
17 to 8 "	Mesembryanthemum harbatum.
8 "	Anagallis arvensis (field pimpernel or poor man's weather glass.)
9 "	Calendula arvensis (field marigold.)
9 to 10 "	Mesembryanthemum crystallinum (ice plant.)
10 to 11 "	Mesembryanthemum undiflorum.
EVENING.	
5 o'clock,	Nyctago hortensis.
6 "	Geranium triste.
6 "	Silene noctiflora.
9 to 10 o'clock,	Cactus grandiflorus.

SCIENTIFIC CRANKS.

Every time we strike a match, says the *Aluminum Age*, we are indebted to the men who have studied science for the mere love of it. The men that worked away at coal tar "just to see what was in it," made the whole world their debtors by discovering alizarin, the coloring principle of madder. And to those men the world is indebted also for aniline, antipyrine and more than one hundred other coal-tar products. Scientists, wondering what was in crude petroleum, found paraffine and vaseline. Pasteur wondered what caused fermentation. He found out and brought a new era to wine-making. The singing and dancing of the tea-kettle attracted the attention of a brain, and we have as a consequence all the applications of steam. The swinging of a chandelier in an Italian cathedral before the eyes of young Galileo was the beginning of a train of thought that resulted in the invention of the pendulum, and through it to the perfecting of the measurement of time, and thus its application and use in navigation, astronomic observations, and in a thousand ways we now pass by unnoticed, has been of such practical value that the debt to scientific thought, even in this one instance, can never be known. Science, in its study of abstract truth, is ever giving to man new beginnings. While the devil is engaged in finding mischief for idle hands to do, science is eternally at work finding something useful for them to do.

OUR NEIGHBOR'S AFFAIRS.

Why discuss them at all? It is such a temptation to add details and distort meanings in order to produce a piquant story, that even good people sometimes yield to it; so 'ware danger and eschew gossip entirely. A word spoken out of season, even the truth told badly, at an improper time, may inflict an injury which it is not in the power of any one to repair. The motives of the individual are quite a secondary matter; the gun-shot wound inflicted by the "man who didn't know his gun was loaded" is as fatal as the murderer's shot. When a cruel wrong has been done an innocent person, it only adds fuel to one's indignation to have the gossip retailer expostulate, with tears in her eyes, that she meant no harm; she only told what she heard; she did not know it would do harm. The harm that has been wrought is a matter that chiefly concerns us in such a case, not the motives. It is a good rule not only to refrain from all evil criticism of persons, but from listening to such criticism. It should systematically be enforced on children that such conversation is beneath them and indicative of low breeding. The writer remembers seeing a mite of eight years old draw herself up when such a conversation which was distasteful to her was taking place. "Mamma has always told me," she said, "never to gossip about my friends, or to go with any one who did, and I don't want to hear anything mean of people I don't know." And this should be the creed of everyone.

WASTE IN CITY AND COUNTRY.

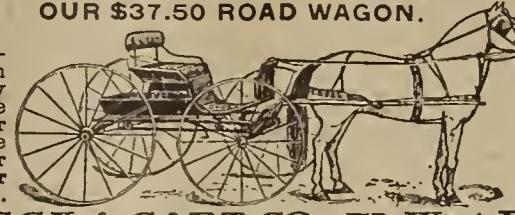
People who live in the country have little idea of the waste that goes on in cities. What goes out of the city kitchen into the garbage wagon, if it had been economically managed, would have fed ten times the number it was bought and paid for. The extravagance in the dwellings of the rich in cities is startling; but while the farmer's wife can give her city sisters lessons in good management, the farmer himself can take lessons from city business men and manufacturers in business management.—*Northwestern Agriculturist*.

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HINTS FOR MAINTAINING HEALTH.

When the health is fairly good, says Juliet Corson, in *Harper's Bazaar*, and there is no special strain to be put upon the system, the normal appetite may be trusted to indicate the kind and quantity of food necessary to maintain that condition. Naturally the appetite varies with the changing seasons, and unless it indicates an unreasonable extreme of indulgence or abstinence, no attention need be paid to any other monitor. Much harm is done by injudicious or meddlesome friends suggesting that a person is too stout or too thin, too pale or too ruddy, and serious disturbances of the system often follow the mischievous advice to take some bitters or pills, or refrain from fattening food or drink. Paying attention to any of these fads is like playing with fire. If you are ill enough to seem to warrant any radical change of diet or any application of medicine, consult your physician at once. Above all, avoid advertised quack medicines. To use the opinion of a successful dealer in them, whose bank balance is more liberal than his conscience, they are "made to sell."

If you feel a little debilitated, take the coca tonic; eat plenty of fresh, ripe fruit and vegetables, especially oranges; drink lemonade, and when unusually fatigued, and just before retiring, drink a glass of milk as hot as can be taken in large sips. Walk reasonably, and sleep in pure air. If a few days of this sort of home treatment fails to bring up the body and mind to their proper tone, call in your doctor and follow his advice.

HURRIED DINNERS.

It is a mistake to eat quickly. Mastication performed in haste must be imperfect even with the best of teeth, and due admixture of the salivary secretion with the food cannot take place. When a crude mass of inadequately-crushed muscular fiber, or undivided solid material of any description, is thrown into the stomach, it acts as a mechanical irritant, and sets up a condition in the mucous membrane, lining that organ, which greatly impedes, if it does not altogether prevent, the process of digestion. When the practice of eating quickly and filling the stomach with unprepared food is habitual, the digestive organ is rendered incapable of performing its proper functions. Either a much larger quantity of food than would be necessary under natural conditions is required, or the system suffers from lack of nourishment. The matter may seem a small one, but it is not so. Just as a man may go on for years with defective teeth, imperfectly masticating his food, and wondering why he suffers from indigestion, so a man may habitually live under an infliction of hurried dinners, and endure the consequent loss of health, without knowing why he is not well, or how easily the cause of his illness might be remedied.—*Medical Classics*.

CHINESE CONCEPTION OF HELL.

The sixth court of hell is situated at the bottom of the great ocean north of Wuchio rock. It is a vast, noisy gehenna, many leagues in extent, and around it are sixteen wards or ante-hells. In the first ward the sinful soul is made to kneel for long periods on hot iron shot; in the second they are placed up to their necks in filth; in the third they are pounded till the blood runs out; in the fourth their mouths are opened with red-hot pincers and filled with needles; in the fifth they are enclosed in a net of thorns and nipped by poisonous locusts; in the seventh the flesh and bones are crushed to a jelly, all except the head; in the eighth the head is denuded of skin and the flesh beaten on the raw; in the ninth the mouth is filled with fire; in the tenth the pounded flesh off of the body is licked and roasted by sulphurous flames; in the eleventh the nostrils are subjected to all loathsome smells known to their tormentors; in the twelfth they are to be butted by rams, oxen and buffalo, and at last subject to crushing pressure by being trampled by horses; in the thirteenth the heart will be taken out and skinned; in the fourteenth the skull will be rubbed with sandstone until it has been entirely worn from the jelly-like mass which was once the body; in the fifteenth the body will be separated in the middle and carried with the bare, bleeding ends sitting on red-hot plates, to the sixteenth ward, where the skin will be removed, dried and rolled up, after having written upon it all the sinful deeds done by the soul while an inhabitant of the fleshy body; after that the body will be consigned to the flames.—*St. Louis Republic*.

Colds with chills, fever and aching bones promptly cured by Dr. Hoosie's Certain Croup Cure. Mailed, 50 cents. Address Hoosie, Buffalo, N. Y.

WHAT TO TRY.

Try pop-corn for nausea. Try cranberries for malaria. Try a sun bath for rheumatism. Try ginger ale for stomach cramps. Try clam broth for a weak stomach. Try cranberry poultice for erysipelas. Try swallowing saliva when troubled with sour stomach.

Try a wet towel to the back of the neck when sleepless. Try buttermilk for removal of freckles, tan and butternut stains.

Try to cultivate an equable temper, and don't borrow trouble ahead.

Try hard cider—a wine-glass full three times a day—forague and rheumatism.

Try a hot, dry flannel over the seat of neuralgic pain, and renew it frequently.

Try snuffing powdered borax up the nostrils for catarrhal cold in the head.

Try taking your cod liver oil in tomato catsup if you want to make it palatable.

Try breathing the fumes of turpentine or carbolic acid to relieve the whooping cough.

Try a cloth wrung out from cold water; put about the neck at night for the sore throat.

Try an extra pair of stockings outside of your shoes when traveling in cold weather.

Try walking with your hands behind you if you find yourself becoming bent forward.

Try a silk handkerchief over your face when obliged to go against a cold, piercing wind.

Try planting sunflowers in your garden if compelled to live in a malarial neighborhood.

Try a saturated solution of bicarbonate of soda (baking soda) in diarrhoeal troubles; give freely.

Try a newspaper over the chest, beneath your coat, as a chest protector in extremely cold weather.—*Health Monthly*.

WISE WORDS.

Love never gives any small gifts.

What the baby learns it never forgets.

Love can be misunderstood, but never overestimated.

Uncharitable criticism is throwing mud at everything you don't like.

One of the hardest things on earth to do is to tell a miser that he is one.

When you want a hard master, work for a beggar who has just become rich.

You can't tell by the looks of a man's ears how much he knows about music.

People will forgive anything sooner than forgetfulness of their own importance.

It is astonishing how much you can find out about human nature by charging ten cents admission.

The thing that is the most dangerous to every man is that which does the most to make him selfish.

FACTS ABOUT YOURSELF.

The average number of teeth is 32.

The weight of the circulating blood is 29 pounds.

The average weight of an adult is 150 pounds and 6 ounces.

The brain of a man exceeds twice that of any other animal.

A man breathes about 20 times a minute and 1,200 times an hour.

A man breathes about 18 pints of air in a minute, or upward of 7 hogsheads a day.

The average weight of the brain of a man is

3½ pounds; of a woman, 2 pounds and 11 ounces.

Five hundred and forty pounds, or 1 hogshead and 1½ pints, of blood pass through the heart in one hour.

The average height of an Englishman is 5 feet 9 inches; of a Frenchman, 5 feet 4 inches; of a Belgian, 5 feet 6½ inches.

The heart sends nearly ten pounds of blood through the veins and arteries each beat, and makes four beats while we breathe once.

One hundred and seventy-five million cells are in the lungs, which would cover a surface thirty times greater than the human body.

The average of the pulse in Infancy is 120 per minute; in manhood, 80; at 60 years, 60. The pulse of females is more frequent than that of males.

Some philosopher has figured out that if the sun were a burning sphere of solid coal it could not last six thousand years. The great value of this item lies in the reflection that the sun is not a burning sphere of solid coal.—*Chicago Times*.

PARSONS PILLS.

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Our Household.

THE BREAKING OF THE COLT.

BY CHARLES F. FOUNTAIN.

Yes, "boys will be boys," and there is no use in talking; We must handle them gently, or get them to balking.

They are just like a colt one is trying to break; The simplest means are the means that we take.

We discard altogether the use of the whip, But have them well harnessed from head to the hip.

We have a good bit fixed in a strong bridle; With this he's checked up to a hook in the girdle.

A stout pair of lines then pass through two bands

At his sides and connect with a strong pair of hands.

And these hands are controlled by a much stronger will,

That don't have for its motto, "I'll break him or kill."

You first say, "Get up!" when you want him to go,

If you want him to stop, you firmly say, "Whoa!"

If he seems disinclined to obey your slight word,

Rest assured he don't understand what he has heard.

You then proceed quickly to teach him their meaning,

Towards firmness and gentleness constantly leaving.

He is lead a few paces ahead in a line, While you hold the reins and say, "Get up!" behind.

This lesson a few times with most colts will show

That when you say "get up," you want him to go.

Pull the line and say, "Gee!" to steer to the right;

For the left you say, "Haw!" and pull the line tight.

But don't pull the left line and tell him to "gee,"

Nor say "haw," and the right line pull, for you see

If you do he will surely get muddled up so, He will not know which way you want him to go.

Don't tell him to "back" when you want him to go;

Don't urge him forward if he must go slow, But tell him, and show him just what he must do,

And stick to him till he does it, with the tenacity of glue.

A word kindly spoken, a reassuring caress, Will do much to alleviate the poor colt's distress.

For all things are new to him; he has much to learn,

And each thing must come by itself, in its turn. He must not be crowded with too much at once,

For fear that you might make a wise colt a dunce.

Now there is just one more thing, more essential than all,

And to it your attention I especially call. To the man or the person who is doing the breaking,

Mark well the means and the methods he is taking.

Does he whip? Does he slash? Does he fume?

Does he quash?

Does he curse? Does he rave and do other things rash?

Does he jerk the colt back when he wants him to go?

And whip him because he does not go slow? Such men have no business in breaking a colt, They should deal with their own kind—the ass and the dol.

'Tis indeed a good maxim and very well spoken;

That "a horse always shows the way he was broken."

So to have a good horse remains most with the trainer.

Parents, act on my words, for they could not be plainer.

HOME TOPICS.

RASPBERRY VINEGAR.—No drink is more refreshing on a hot day than a glass of nice, cold raspberry vinegar. When raspberries are plenty, it is very little trouble to make and bottle enough to last all through the hot season. Take enough red raspberries to nearly fill a stone jar, pour over them sufficient cider vinegar to just cover them. Cover the jar closely and set it in a cool place for thirty-six hours, then strain the juice through a jelly-bag as if for jelly; add a pound of sugar to each pint of juice, put it over the fire and let it boil three or four minutes, skimming it meanwhile. Bottle it while hot and seal the tops of the corks, or tie a layer of cotton over the tops, which will do as well. Pint bottles are the most convenient size to use.

POTATOES.—Before now potatoes are

ready for use, the last of the old potatoes are apt to become quite tasteless, and extra care is needed in the cooking to make them palatable. After paring the potatoes, let them lay in cold water a few minutes and then trim off any spots that turn dark. Put into salted, boiling water, and as soon as done, drain the water off and shake the sauce-pan a minute or two at an open window or door, to whiten them; then mash them and season as usual, except add more milk or cream, and lastly, beat in the whipped white of an egg. Mound the potatoes in a pie-plate and set it in the oven five minutes before serving.

Another good way to cook old potatoes is to slice them and cook until done in salted water, then pour into a colander to drain; put a teacupful of rich milk into the sauce-pan, add a teaspoonful of flour, rubbed smooth in two teaspoonfuls of butter, a teaspoonful of minced parsley and a little pepper. Put the potatoes back into the sauce-pan and let them boil up once, and serve. If it is liked, the juice of half a lemon may be squeezed in just before serving.

THE USE OF SLANG.—I want to say a few words to the girls, yes, and boys, too, about the use of slang. It is not only the coarseness of using slang, but the habit cripples one in the use of good language. It dwarfs the vocabulary and narrows and warps the powers of conversation. Of course, if you think about it at all, you do not intend to continue the use of slang all your lives. You think it does not matter as long as you are school boys and girls, among yourselves and in your own homes. You would not

think of using slang expressions when in conversation with strangers. This is a mistake. The habit will become so fixed and your use of good language so crippled, that you will be unable to express your ideas in any other way. Believe me, this is the certain result of a slangy, careless habit of speech when you are young, and bitter mortification will often follow.

The art of conversation is one which should be cultivated by all young people. It is a valuable accomplishment to be able to express your thoughts readily in choice English, and it is one which can best be acquired when you are young.

Writing ones ideas on any given subject is a good exercise to increase the vocabulary, as you will not use slang then, and will notice a repetition of the same word when a synonym would be better. A little book, called *Popular Synonyms*, is published by Burrows Bros., Cleveland, Ohio, and sold by all book-sellers for ten cents, that is worth many times its cost.

The average school girl or boy has but a meager vocabulary at best, and should seek to increase it by the use of some help of this kind, by reading books written by our best authors, and by listening to the best speakers whenever an opportunity offers.

If you have already acquired the habit of using slang, begin at once to correct it, and I am certain that in after years you will never regret having taken my advice.

MAIDA MCL.

WOOD CARVING FOR BOYS.

BY KATE KAUFFMAN.

No. 2.

There are a few standard designs in carving that date back so far in the history



WOOD CARVING.—No. 1.

of art decoration that no one knows who invented them. They are also in fresco and on wall-paper, light and shade taking the place of relief, and producing the same expression.

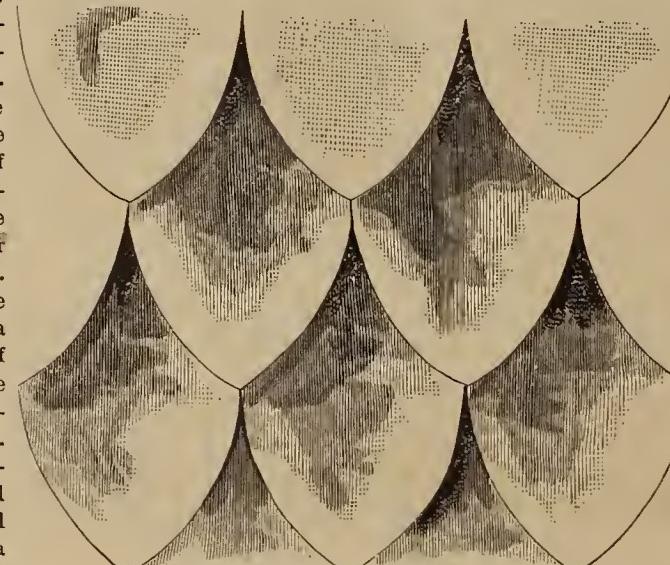
No. 1 is called "dog-tooth." I can't tell you for what reason. Now, if you have good eyes and some art sense, by looking at our illustration you can see the form; it will not look flat to you, but will seem to be a row of little pyramids. I know a

ceiling which has a row of this design in its ornament, and as one looks up, it is difficult to believe that the ceiling is not carved, so well does the arrangement of light and shade bring out the points.

You can make this design any size; the only thing necessary is that the divisions be exactly square, and that you place a point exactly in the middle of each square; then with your chisel slant down each side. I should take my strip of wood and have it a little over half an inch wide (for in this design it is best to have no edges; when used in a piece of furniture, it is fitted in with other strips of wood, so take a very narrow board, say three quarters of an inch), and then divide it into squares three quarters of an inch in dimensions. With the parting-tool separate the squares; then gradually slant down the wood on the four sides. A little experience will teach you more than I can tell with hundreds of words, and if you spoil a few points, you need not feel that your tuition is very expensive.

No. 2 is not at all difficult. It is made with the chisel, and all you need to be careful about is to get your pattern put on with exact neatness and then cut cleanly. You can see that where our picture has the darkest shading, it means that the cutting is to be deepest. I think smart boys do not require much explanation for this.

To do No. 3 nicely, you ought to have a flat gouge that would make one side of each point. I always call this "shingle pattern." Does it not look something



WOOD CARVING.—No. 2.

like over-lapping shingles? Perhaps it has a better name. If any one knows, let him write and tell me. It is a classic pattern, and is found on antique objects. If you have only a small gouge, you must make your pattern to suit it. To lay off your design, divide off the distances with the inch measure, indicating precisely where the rounding points should be, and where the sharp points. Then make a pattern of one shingle, using a stiff card; then take a sharp lead-pencil, and after laying down the stiff card pattern, mark around it. This design is good to use on a large surface. It is nice for the back of a shelf in a cabinet and many other places. You boys will be smart enough to find out where it would be appropriate, and if your mothers wish some brackets or wall-pockets, they will help you with suggestions.

In order to work in a satisfactory way, first mark off your pattern. Then go all over it with your flat gouge, holding it upright and striking with your mallet. Strike so that the gouge will sink deepest in the wood where you see that the shading is darkest in the picture given you, for, you remember, where the shading is darkest the cutting must be deepest. You must then lower the wood so that it will slant gradually. You may have to use your sharp-pointed pocket-knife to get the wood out of the narrow, sharp corners.

Any boy who learns to make these three patterns with neatness and force, is far on the way to be a successful and respectable wood carver, and if he sees fit, can declare himself no longer a mere amateur, but a money-making professional.

COMPLETED TO DEADWOOD.

The Burlington Route, C. B. & Q. R. R., from Chicago, Peoria and St. Louis, is now completed, and daily passenger trains are running through Lincoln, Neb., and Custer, S. D., to Deadwood. Also to Newcastle, Wyoming. Sleeping cars to Deadwood.

ONE WAY TO SAVE STRENGTH.

"Oh, I was so glad when I got through with house cleaning. I really believe I began to dread it as soon as we were through last year. It is too hard on one woman, no longer young, to do the work alone. Sometimes I think I can endure it no longer, but I manage to get along somehow."

"Did you take up your parlor carpet, too?" asked Miss Lee, who was spending an afternoon with Mrs. Jess.



WOOD CARVING.—No. 3.

"No, indeed. I think it a piece of foolishness, this straining the life out of one's body just to be doing. If I do the necessary work I think I do well."

"But are you not fearful that the moths will get in and ruin your carpet? They are almost sure to do so, since it is Brussels carpet, and out in the country, too."

"Not at all. I have a sure preventive. Did you not know of it?"

"Assuredly not. Is it patented? Everything calculated to benefit the majority is, nowadays."

"Well, this is an exception. It is just hot irons, a yard of cotton flannel, a basin of clear water and me."

"Now, Mrs. Jess, you're making me the target of a joke. You think I'm very verdant, I suppose."

"No, indeed, my dear, I am serious. I just wet the cotton and lay it in folds along the edge of the carpet, then I set my iron down on the end of the cloth and let it remain until the cloth is almost dry. I then move it its width down, taking care that the heat reaches every inch along the edge. This method kills all moths and larvae, as they are invariably near the edge. My in-grain carpets receive the same treatment. I usually go over them in July; sometimes not until September or October."

"Thank you. I'll try to remember that. Please don't think me inquisitive, but I should like to know who painted that lovely plush bower and who embroidered your table-scarf."

"I won't tell you that I think you're treating me to "taffy," though I do. I'll just tell you the secret of my pretties. That 'lovely painting,' as you term it, is a picture, mounted on that plush with flour starch. Ahem! That table-scarf has a history. It first served me twelve years in a dress, then it began to fulfill its present mission. It is ladies' cloth, lined with silesia. That embroidery is just some pieces of applique I picked up at a bargain and put on myself. Did you notice that sachet-bag over the corner of my dresser? That pretty thing is made of two paper napkins, souvenirs of a supper. That pretty blue vase on my dresser once contained mustard. The flowers with which it is decorated were once in a florist's catalogue. The paste I used to make them adhere to the glass was made of the white of an egg and flour. (I always use the same kind of paste to fasten the labels on my jelly glasses.) I varnished the flowers very carefully, so I can wash my vase without injury. You see, one can have pretty things at a trifling cost. I have no time for elaborate fancy work. I am compelled to do the simple things."

"Well, I think you should be glad to possess a genius for utilizing cheap things into articles of ornamentation. I should."

ELZA RENAN.

CARE OF PIANOS.

It has always been thought, heretofore, that pianos should be kept very dry, but we are now told that pianos are not nearly affected so much by heat or cold as they are by dryness. It is not generally known that the sounding-board, the life of the piano, is forced into the case, when it is made, so tightly that it bulges up in the centre, or has a "belly," as it is called by pianoforte makers, on the same principle as a violin. The wood is supposed to be as dry as possible, but of course it contains some moisture and gathers more on damp days and in handling. When a piano is put into an over-heated, dry room, all this moisture is dried out and the board loses its "belly," gets flabby and finally cracks. Even if it does not crack the tone loses its resonance and grows

thin and tiny; the felt cloth and leather used in the action dries up and the whole machine rattles. Now, how to prevent this. Keep a growing plant in your room, and so long as your plant thrives your piano ought to, or else there is something wrong with it. You can readily notice how much more water the plant will absorb in the room with the piano than in any other room. Some place a large sponge in a vase and set it under the piano, keeping it wet constantly. This is always necessary where furnaces are used or natural gas.

A piano should be treated with the care one gives a watch. Dust accumulates very soon in all its parts and should be carefully removed with a chamois skin on the polished parts and a wing on the inner parts. Any foreign substance on the sounding-board can readily be detected by

the tone, and should be removed at once. Since so many have the upright pianos, the scarf cover has superseded the old-time rubber cover, lined with cotton flannel. Dust is so penetrating it gets into everything, so the cover doesn't make much difference, so it gets daily care. In the upright piano great care should be taken of the boards around the pedals at the foot, as they are so easily marred, and the polish once removed cannot be replaced. A foot-rug placed under the pedals will save the wear of the carpet very much. *BETTINA HOLLIS.*

ACCESSORIES.

JACKET.—In our illustration given, is a velvet, short-sleeved jacket which can be used with a thin dress on cool days or evenings. The back can be cut from a dress lining, keeping it all in one. The fronts meet at the neck and round off under the arms. It should be lined with silk so as to slip on and off easily, and trimmed all around with ball fringe of some kind. A black one is serviceable with all dresses and it can be used also to trim up a wool dress with, both for a little girl and a large one.

FANCY STITCHES.—As so many fancy stitches are employed to decorate wash dresses of all kinds, we give a sample of the various stitches. In the one is shown the position of the needle. A little practice is all that is necessary to make the work look nicely. Upon fine ginghams use linen floss, upon white goods either floss or silk, and silk upon wool goods. There is a very tight-twisted silk that comes for sewing-machine use, that is especially nice for this work. It is thirty-five cents a spool and is better than the looser-twisted silks. Dark, rich red, black, white and gold are the principal colors. A good-sized needle should be used, so as not to draw the work.

BETTINA HOLLIS.

CONTRIBUTED HINTS.

CHOCOLATE PUDDING.—

5 tablespoonfuls grated bread crumbs,
4 tablespoonfuls grated chocolate,
5 eggs (yolks only),
1 quart of milk,
1 teacupful of sugar.

Put the milk and chocolate on the fire to boil, then add the crumbs and sugar. Remove from the fire and add the well-beaten yolks. Bake, and spread the whites of eggs, well beaten with a little sugar and vanilla, on top. *KATIE S. P.*

ONION PIE.—

Slice the onions into a pan



FANCY JACKET.

or skillet, put in plenty of butter or grease out of fresh pork, plenty of black pepper, a little water and a biscuit-dough crust on top, with a hole in the middle to keep from stewing out around the edges. Bake in the stove till crust is cooked; then set on top of stove and pour in a teacupful of milk thickened with flour. Cook a little and dish it out.

SORGHUM CHESS CAKE.—Beat the yolks of three eggs, one teacupful of sorghum molasses, a small cupful of butter. Season with nutmeg if you like it. Line custard-pans with common dough crust, put in the mixture about a quarter of an inch thick and set in the stove until a cooked-looking steam forms. Have the whites of the eggs already beaten to a stiff froth and sweetened with white sugar, spread it on each one and return to the oven; brown a cream color and take out. If put in a safe place it will keep good a week.

TO KEEP MEAL FROM BECOMING MUSTY.

—Put salt in it and keep in a dry place. I kept meal sweet and all right in my cook-room from July throughout the summer. I think I put in about a handful of salt to a bushel of meal.

TO KEEP DRIED FRUIT.—Take it in when the sun is shining on it, put it in a box lined with newspaper and cover lined the same. Set it in a dark, dry place.

JENNIE JAMES.

A CHEAP LAYER OR JELLY CAKE.—

1 cupful of sugar,
1 cupful of sweet milk,
1 teaspoonful of soda,
2 teaspoonfuls cream of tartar,
2 cupfuls of flour.
Bake in three layers.

Very nice with cranberry sauce for filling, or the following, which makes of it lemon layer cake. **Filling**—Grate the yellow of the rind of one lemon, add the juice, a large spoonful of water, half a cupful of sugar, lump of butter large as a walnut, one egg. Beat all together and let boil up a minute or two in a small tin. When the cake is done, take out and spread with this mixture, having it already made and cooled.

A. M. O.

HOME-MADE BAROMETER.—

Take a white bottle and half fill it with gum camphor; then fill with whiskey and cork tightly. In clear weather the whiskey will be at the top and clear. In rainy weather the camphor will rise to the top and it will have a cloudy appearance. It will usually change about twenty-four hours before a change in the weather.

I think this is something like what is used in the "storm-glasses" sold in stores; but as theirs is a white liquid, I suppose they use alcohol instead of whiskey.

D. M. C.

LINEN CLOSET.

There are few houses built that have any conveniences in the way of cupboards. Even if they are built in the house, they are often so unfinished or damp as to be quite useless for linen. Our illustration is one that could be made and kept in the family for all time. Four feet high is a good height, with the top finished flat, so as to be used if needed.

Each shelf has its own arrangement for the various articles. Napkins can be kept in piles, each particular dozen by itself; table-cloths, sheets and pillow-cases laid as they will be needed. System in house-keeping saves much care and trouble. Upon one door should hang a slate and pencil, to note what is removed; on the other door can be placed a list of the contents and their locality, so that any one could find what was needed, even in a case of emergency.

Many ladies use a trunk for this purpose, but we think this would seem more convenient. It could be made of cedar, and always be of value. *CHRISTIE IRVING.*

THE CHILD'S STRENGTHENER is Dr. D. Jayne's Tonic Vermifuge, which corrects all acidity of the stomach, restores digestion and imparts strength and vigor to adults and children alike. Delicate children are almost always benefited by its use; and, if worms be present, it is the mildest and safest of remedies. Sold by all Druggists.

If thou dost bid thy friend farewell,
But for one night though that farwell may be,
Press thou his hand in thine.
How canst thou tell how far from thee
Fate or caprice may lead his steps ere that to-
morrow comes?
Men have been known to lightly turn the cor-
ners of a street,
And days have grown to months, and mouths
to lagging years,
Ere they have looked in loving eyes again.
Parting, at best, is underlaid
With tears and pain.

Therefore, lest sudden death should come be-
tween,

Or time or distance, clasp with pressure firm
The hand of him who goeth forth;

Unseen, fate goeth too.

Yes, find thou always time to say some earnest

word

Between the idle talk,
Lest with thee henceforth,
Night and day, regret should walk.

—Coventry Patmore.

CUCUMBERS NOT NOXIOUS.

Many people are under the impression that cucumber is very indigestible, and when they eat it they do so under protest and with apprehensions of possible dire consequences. How this delusion can have arisen it is difficult to say, unless it be that cucumber is often eaten with salmon and other indigestible table friends. It is not the cucumber, however, but the salmon that sits so heavily upon our stomach's throne. Cucumber, in fact, is very digestible when it is eaten properly. It cannot, indeed, be otherwise when it is remembered that it consists mainly of water, and that those parts which are not water are almost exclusively cells of a very rapid growth. In eating cucumber it is well to cut into thin slices, and to masticate them thoroughly. Even the

plants for house culture, both on account of their easy growth and the beauty of their leaves and flowers. They grow luxuriantly with little care, and their foliage is as handsome as their bloom. They are subject to the attack of no insect of any kind and do not require much sun. They are divided into three classes, Rex or ornamental leaved, tuberous rooted and flowering varieties. Of these, the Rex is king. They are a little more difficult to grow than the other kinds, but fully repay the trouble. In giving them water, take care not to wet the leaves, as it will cause them to decay. Give plenty of light, heat and moisture, and keep free from dust. These are propagated from the leaves. Press the leaves down flat in wet sand and keep the sand wet or the leaf will rise. Louis

FANCY STITCH. Cretin is the most beautiful of the Rex begonias. The foliage is large and the ground color dark green, with a silver band tinted with crimson. It is of very easy growth, and an excellent plant for window decoration. Give an occasional watering with liquid manure. Queen of Hanover has a leaf of soft, velvety texture, the zone formed by tiny silver dots. The tuberous-rooted varieties are treated like most other bulbs. They will do as well bedded out as in pots. They will grow almost anywhere and bloom profusely. They should be taken up in the fall and stored in a cool, dry place. They are as easy to keep and plant as a potato. The colors are rich and varied, ranging from deep crimson to pure white. The flowering varieties are deservedly popular. The beauty of their foliage, combined with their graceful flowers and free-blooming qualities, make them one of the most desirable classes of plants grown. They require about the same temperature as Bouvardias—an average of 70 degrees. Rubra is one of the finest begonias in cultivation, and the most satisfactory of all for house culture. If you can have only one begonia, let it be a Rubra, for it will prove a constant delight. It is both a summer and winter bloomer. The foliage is dark and glossy, and the flowers are a bright scarlet. Sanguinea has dark green leaves, with the under side crimson and flowers white. Grandiflora is one of the prettiest of the flowering varieties. The flowers are large and of a delicate rose color. Diggswelliana is a handsome variety and a free bloomer. The flowers are dark crimson with a pink center. Washingtonia has large, tropical leaves and large panicles of pure white flowers. Subpetitatum Nigricans is a fine variety for hanging-baskets. The flowers are a pale pink and borne on long stems, the leaves are a dark, rich green on the upper surface and crimson underneath. McBethii has fern-like foliage and panicles of snow-white flowers, produced in the greatest profusion. Tbis is the most persistent bloomer of the begonias.—*Margaret Percy.*

PRIZE BABIES.

About a year ago ten prizes were offered to the prettiest babies who had used Lactated Food. The contest created great interest, and so many requests have been made for the pictures of the fortunate children, that Wells, Richardson & Co., Burlington, Vt., have published them in a neat little book and offer to send a copy free, together with a handsome birthday card, to any mother with a baby under a year old.

The winner of the first prize was Georgieanna Simpkins, Fairbury, Neb., whose father writes: "Our baby has used Lactated Food since she was a week old, and her health has been remarkable." Do not wait until your child is sick, but feed it Lactated Food and so keep the little one well and hearty. Write for book and card to-day, and if your dealer does not sell the Food, send 25 cents for a can by mail.

Koch's lymph, if unsold six months after purchase, must be returned to the laboratory, where it will be exchanged for fresh lymph. This would be an excellent idea to introduce in this country with reference to butter.

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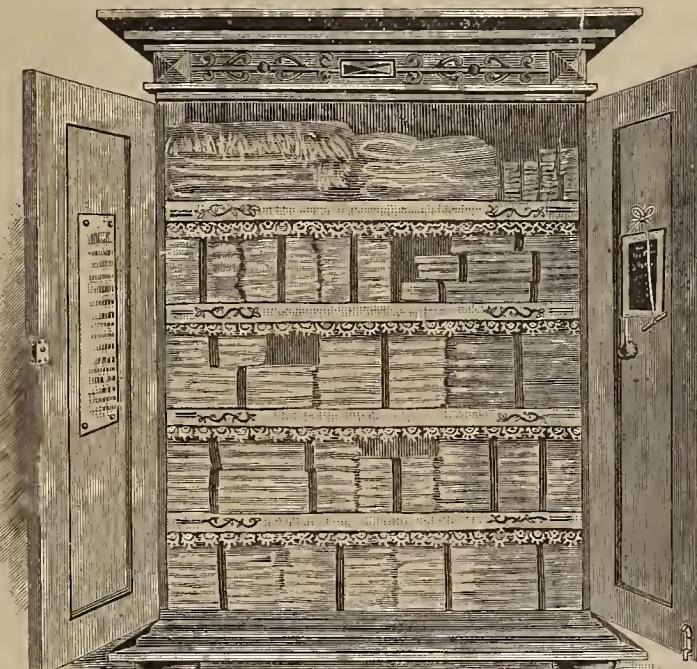
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LINEN CLOSET.

vinegar and the pepper that are so often added to it are of service to the digestion, if not taken in excess. The cucumber, as everyone knows, belongs to the melon tribe, but in our somewhat cold country it does not grow to any very large size, and therefore it is firmer and looks less digestible than its congener, the melon.—*London Hospital.*

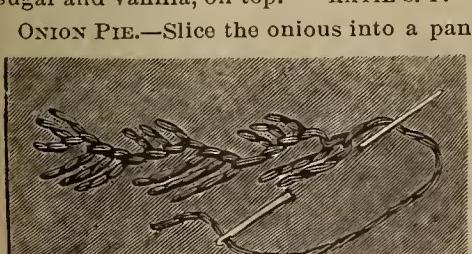
FOR THE FLOWER LOVERS.

GERANIUMS.—Geraniums are among the best plants for the house, for they will bear more dust, neglect and abuse, and still live, than any plant I know of. It seems to be the nature of the geranium to grow tall, but I find I have more bloom from young plants than from old ones; so I have geraniums in bloom in winter, I cut good, strong slips from the large plants, in April or May, and set them in boxes of sand to root. When rooted, I pot

those I want for winter blooming; all the others are set in the yard, where they bloom all summer. The small plants are not allowed to bloom at all; every bud is picked off, and by pinching out the tops the plants grow

bushy and strong. I do not pick off any buds after the first of September, but let the plants bloom as much as they please. The large plants from which the slips are taken are turned out of the pots and either set in the flower-beds or in boxes on the piazza, where they produce an abundance of bloom. There are now in cultivation over 500 varieties of geraniums, but many of them are so near alike, only an expert could tell the difference. Some of the very prettiest colors are found among the single geraniums, and the single varieties always produce the most flowers.—*Chatta Bella.*

GERANIUMS.—Begonias are very satisfactory



FANCY STITCH.

or skillet, put in plenty of butter or grease out of fresh pork, plenty of black pepper, a little water and a biscuit-dough crust on top, with a hole in the middle to keep from stewing out around the edges. Bake in the stove till crust is cooked; then set on top of stove and pour in a teacupful of milk thickened with flour. Cook a little and dish it out.

Our Sunday Afternoon.

D o with thy strength, do with thy might
The work that lies nearest, 'twixt morn-
ing and night.
The talents entrusted thee try to increase,
Lest they rust in thy coffers and rob thee of
peace.
The pathway of duty keep ever in sight,
Then work with thy strength, work with thy
might.

ONLY A YEAR.

NE year ago—what loves, what schemes,
Far into life!
What joyous hopes, with high resolves,
What generous strife!

One year—one year—one little year,
And so much gone!
And yet the even flow of life
Moves calmly on.

—Harriet Beecher Stowe.

NO WONDER HIS WIFE LOVED HIM.

LHE dear little wife had spent a wearisome day, for the baby had been fretful and the maid had been out. Along in the evening, rather later than usual, the baby, bathed and soothed into comfort, had fallen asleep, and the mother came softly stepping down from her chamber into the parlor, where her husband was talking to a friend.

"Released at last, my darling?" said her husband, rising as she entered, and waiting until she had taken a seat before resuming his own. "Let me get you an easier chair," suiting the action to the word, "here in the window where you will feel the breeze. Now let the screen he set between your face and the light. I am so glad you can rest awhile!"

And then the good man, the sweet, chivalric gentleman, as scrupulously differential to his wife as he would have been to the stateliest lady in the land, went on with the conversation, which her entrance had for the moment interrupted.

"I saw these roses on the stand by the ferry, and they looked so much like those that used to grow under your sitting-room window in the old home that I bought them for you. And here is the book which Parsons was talking about the other night. I thought you would like to read it; or, if you like, I'll read it to you while you sew."

The thoughtfulness which makes the husband pay these lover-like attentions, just as he did in the courting days, goes far to fill the wife's heart with happiness, far toward keeping her young and fair. Life has too much prose about it for many a woman who finds herself tied down during child-nursing years to an apparently never-ending routine of small duties which make no show. An appreciative husband, who does not reserve his tributes of love and admiration for great occasions, who is tenderly sympathetic when the ordinary affairs of life and the household are the only ones in question, deserves to be held in honor.

The little courtesies must not, of course, be all on one side. In the true home they never are—John's comfort is paramount with John's wife; she knows the dishes he prefers, she invites the friends he likes, she arranges the home routine with an eye to his comfort. If her duties are of a kind to take a good deal out of her vitality and freshness, his, in the competitions of business, are not less exacting. She owes it to him to slip on a clean gown, to "pick up" the disorderly room, that his early home coming may be a festival. In the dewy ministry of small daily attentions true love thrives and grows.—Christian Union.

COOL RETREATS.

There is Denver, cool, clear, inviting; Colorado Springs, the home-like Manitou, the abode of the gods; Idaho Springs and the famous baths, and Boulder, a lovely resting place at the foot of the mountains. Garfield Beach, on Great Salt Lake, as a bathing resort is not equalled in this or any other country; nature's champagne flows the year round at Soda Springs, Idaho; the Columbia river, broad and grand, is without a peer for a summer tour, while the beauties of Cœur d'Alene lake and the splendid new region of the Pacific Northwest opens up a line of tourist travel unsurpassed in America. You can have your choice of climate, any kind of sport, and every condition of superb scenery on the manifold lines of the Union Pacific System.

NOTHING NEW IN THE WORLD.

Before Moses led the children of Israel out of Egypt, when Rome was not built and Greek civilization was still in its infancy, the land of the Nile had seen workingmen's strikes, labor riots, compromises and arbitrations. This, at least, M. Maspero, the Egyptologist, in his "Historic Readings," which have just been issued, makes clear as the fact of a strike to-day in the English or American coal mines, in his description of a strike of Egyptian masons and bricklayers, which took place only about thirty centuries ago, and in its details reminds one a good deal of our own times' labor disputes and wage problems. In the place of a kaiser or capital king, a Pharaoh is the ruler to whom the dark-skinned, meanly-paid and poorly-fed workingmen appeal; instead of mining and railway work, the construction of a temple forms the task of the toilers, and the defaulting roadmaster, gang boss or contractor of modern date is represented by the taskmasters of whom Moses writes in the Second Book of the Pentateuch. We quote from a condensed report of the translation of the papyrus made by M. Maspero:

"On the 10th of the month, the builders employed at the temple rushed tumultuously out of the place where they were working and sat down behind a chapel in the temple precincts, exclaiming: 'We are hungry, and there are eighteen days before the next pay-day.' They charged the paymaster with dishonesty and giving false measure; the latter charged the men with want of foresight and spending their wages as soon as they touched them. After some further negotiations with government officers, the men resumed work on the understanding that the king himself should receive their complaint. Two days later Pharaoh arrives, the matter is laid before him, relief is ordered and quiet restored. But soon provisions fail again, and discontent breaks out with renewed violence. On the 16th of the following month the strike is in full force again. Not a man will work, not a tool is lifted. On the 19th they attempt to leave the precincts of the temple to carry their grievances before the public, but effective precautions have been taken. No one can leave. On the following day, however, after resorting to more noisy methods in appealing to their taskmaster, they decide to apply to the governor, and rush through the busy streets of the city, to the inconvenience of pedestrians, to the governor's place. Many hours are spent in discussing their grievances and position. Stubbornly refusing to take up their work and disturbing the order of the streets, they ultimately obtain part, at least, of their demands. More serious consequences are avoided by the intercession of the authorities, and a compromise is effected, to last till—the next strike."

Notice how the incidents of this strike three thousand years ago are identical with every-day occurrences in the nineteenth century. They wanted a weekly pay system and better wages. The reply was the men got wages enough; they were too prodigal of their money, and it was too much trouble for the temple clerks to make out the weekly pay-rolls. The Egyptian strikers loitered in the highways, probably on the lookout for "scabs," and the resources of the judiciary of that day did not contemplate an injunction and punishment of the strikers for contempt of court.—Pittsburg Post.

MEN WHO MEAN BUSINESS.

The servants of God mean business. They do not play at preaching, but they plead with men. They do not talk for talking's sake, but they persuade for Jesus' sake. They are not sent into the world to tickle men's ears, nor to make a display of elocution, nor to quote poetry. Their's is an errand of life or death to human souls. They have something to say which so presses upon them that they must say it. "Woe is unto me if I preach not the gospel!" They burn with an inward fire, for the word of the Lord is as fire in their bones, consuming them. The truth presses them into its service, and they cannot escape from it. If, indeed, they be the servants of God, they must speak the things which they have seen and heard. The servants of God have no feathers in their caps, but burdens on their hearts.

WE SELL DIRECT TO FAMILIES

And make it easy for you to buy of us no matter where you live.
Yes, my dear, your Marchal & Smith Piano is a delightful one, the tone is so sweet and pure, the action so fairy-like, and the finish so elegant that nothing is left to wish for. Their Organs, too, are as sweet and beautiful as their Pianos.

I wrote and told them just what I wanted, and they sent it to me, agreeing to take it back and pay the freight both ways if I did not like it, but I could not be better pleased if I had a thousand to choose from. They send their catalogue free to every one who wishes to buy.

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Our Farm.**THE POULTRY YARD.**

Conducted by P. H. Jacobs, Hammonton, New Jersey.

SAVE THIS FOR LICE.

DIRECTOR MENKE (Arkansas, Bulletin 15) reports a new insecticide—or a new combination—which promises well. It is the kerosene extract of pyrethrum. One and one half gallons of kerosene was soaked through two and one half pounds of pyrethrum, resulting in a yellowish, oily extract which will not mix with water, but which will form an emulsion with soap similar to kerosene emulsions. One pound of soap dissolved in one gallon of boiling water added to one gallon of the extract, well mixed or churned with a force-pump, made a perfect emulsion which, when diluted—one part of emulsion to 450 parts of water—readily killed cotton worms. It seems to combine the properties of kerosene and pyrethrum, and to be more effective than either, easier to handle and cheaper. It will be well for horticulturists to try this extract, as it is very easily prepared. Prof. Menke also experimented with veratrine, which, when mixed one part to sixty-four of flour, was rather more effective than the usual strength of Paris green. Veratrine is obtained from the root of hellebore and from sabadilla seeds. It is a white, crystalline powder, having an acrid, burning taste. It is used in ointments for the treatment of neuralgia or rheumatism. The supply at present is limited.'

LATE LAYERS.

There are hens that begin to lay on the advent of spring and lay well until winter approaches, when they cease and begin to moult. Other hens moult in the fall, but do not lay in winter. The hens known as the early layers begin in November, while those beginning in the spring are known as late layers. Only a careful record of the number of eggs laid and the cost of food and incidentals, will enable the farmer to make a comparison of the profits from them. It is not always the hen that lays in the winter from which the greater profit comes. A hen that begins after the winter is over, and which seeks the greater portion of her food by foraging, may give a larger profit than the hen that produced the larger number of eggs in winter. Much depends on each particular hen, the individual characteristics and the breed largely affecting the matter of profit. The point is to make the largest profit, whether in winter or in summer.

QUALITY MAKES THE PRICE.

Make it a point to have your poultry of the best quality before shipping to market. One who is not accustomed to visiting the large markets knows nothing of the enormous amount of inferior poultry that is sold, and which largely affects the prices; yet, there is always a demand for that which is good, and at a price above the regular quotations. The assorting of the carcasses before shipping also leads to better prices. Old roosters (which seldom sell at more than half price) should not be in the same boxes or barrels with better stock; and to ship poultry alive, and have roosters in the coop with fat hens, is simply to lower the price of the hens, as the buyer will estimate the value by the presence of the inferior stock. In fact, never send any poultry to market unless in first-class condition, and under no circumstance ship the inferior with that which is better.

TURNIPS FOR DUCKS.

Grow a crop of turnips for ducks, if you intend to raise a large number of ducks. On the large establishments, where hundreds of ducks are raised, the principal food for them is cooked turnips, with a small proportion of ground grain. No crop can be grown to better advantage than turnips, and in no way can turnips be grown so profitably as to feed them to ducks. Ducks and turnips are adjuncts to each other on the duck farms, for without turnips the ducks could not be made to lay so well.

PLAYING CARDS.

You can obtain a pack of best quality playing cards by sending fifteen cents in postage to P. S. EUSTIS, Gen'l Pass. Agt. C. B. & Q. R.R., Chicago, Ill.

FATTENING YOUNG FOWLS.

While growing, the young cockerels intended for market will not fatten as readily as will adults, but they will make a gain in weight that will fully compensate for any care that may be given. If they cannot be made fat, get them in as good condition as possible, so as to secure the best prices. The young pullets will also convert their food into growth rather than into fat; and this is desirable. The males should be made fat and the pullets kept in moderate condition. To do this, separate the young cockerels from the pullets and give the cockerels all the corn they will eat, but give the pullets little or no corn, a mess of meat, two or three times a week, being better than any other food for them. All birds should be separated from the flock if they are to be sent to market, as it is more economical to do so, while it avoids overfeeding the laying hens.

POULTRY-HOUSE FOR A CITY LOT.

Mr. H. J. Mansfield, Indiana, sends a plan of a poultry-house which he thinks suitable for one living on a city lot, the cost of which should not exceed \$25. The house is 8 by 14 feet, 10 feet high at the front and 6 feet at the rear. The front should have a large, "store-front" window, about 5 by 9 feet. The department for the fowls is 8 by 10 feet of floor space, covered with fine gravel or sand six to eight inches deep. The roosts are movable and are over a platform, which is fastened to the wall with hinges, so that it can be raised

desired early in the season next year. Pekins grow very fast and mature early. When they begin to lay, they produce a large number of eggs before they cease.

LARGE MALES.

If early broilers are the object in the winter hatching, the small males are best. The hens should be large; but extra heavy males seldom prove serviceable if they are kept in confinement too closely and are allowed to become fat. For broilers, a Leghorn male, crossed with large hens, will produce excellent stock, and it will pay to send the large, heavy cockerels to market now. Size is of but little consequence if the eggs fail to hatch when broilers are being produced for market. What is then wanted is the greatest number of chicks.

SELLING OLD HENS.

If a hen is old, and has given a good record, do not condemn her too hastily, as sometimes a hen is serviceable until she is six or seven years old. The best guide is the time at which the hens begin to moult. If an old hen begins to moult in July, she will, in all probability, lay as well next winter as she did last. In selling old hens, select those that are overfat and which have ceased to lay, but which show no signs of moulting. Those that are active and lay well, may be better for next season than the pullets.

CORRESPONDENCE.

RESULTS WITH CROSS-BRED FOWLS.—I have long been a reader of your valuable paper,

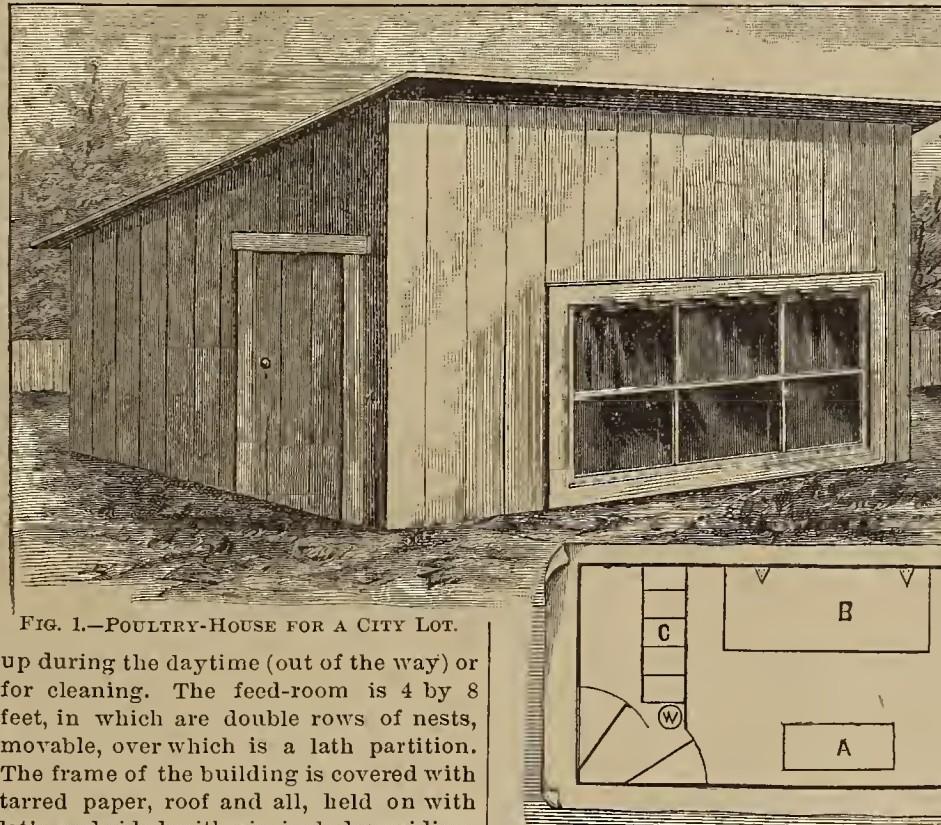


FIG. 1.—POULTRY-HOUSE FOR A CITY LOT.

up during the daytime (out of the way) or for cleaning. The feed-room is 4 by 8 feet, in which are double rows of nests, movable, over which is a lath partition. The frame of the building is covered with tarred paper, roof and all, held on with lath, and sided with six-inch drop siding. The lath gives a half-inch air chamber all over. From 20 to 25 hens can be kept in the house, with a yard 30 by 50 feet.

Fig. 2 shows the ground plan, A being the dust-box, B, the roosts over platform, and C, the nests. W, shows the water-can. This house affords ample room to the flock, is cheap, and also well arranged.

WIRE FENCES.

There is one point that must not be overlooked when the fence is being made, and that is, a fence should be a wind-brake, if possible. There is no material cheaper or more enduring than wire for fencing a poultry-yard; yet in the winter season it lets the winds have full sweep. This matter should be considered by those who may, at this season, make preparations for the future.

SORGHUM SEED FOR CHICKS.

A small patch of sorghum, and the seed kept for chicks, will not fail to provide a suitable and excellent food for them. It may here be mentioned that pop-corn is another crop that may be grown for chicks. It is in providing a variety that success is met with. Wheat can probably be bought cheaper than it can be grown, but sorghum seed is not always easily obtainable at prices to permit of feeding it to chicks.

PEKIN DUCKS AS LAYERS.

The Pekins will often begin to lay when they are six months old, but for next year the layers should be from ducklings hatched in April, or the old ducks should be retained. It is better to use old females with young drakes, if fertile eggs are

desired early in the season next year. Pekins grow very fast and mature early. When they begin to lay, they produce a large number of eggs before they cease.

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RESULTS WITH CROSS-BRED FOWLS.—I have long been a reader of your valuable paper,

to the quart would make the cost of feed for the thirty-nine fowls just one cent per day, which would be less than ten cents to the fowl per year. Any practical poultryman knows that poultry cannot be kept for any such figures and obtain good results, as is claimed in his article. The weight of food consumed per hen would be less than half an ounce per day, and a part of that is cheat. Now, Brother "T. J. D." either has not given the whole facts in the matter, or else his article is quite misleading. A. M. W.

[It may be that he gives plenty of range for foraglug.—Ed.]

INQUIRIES ANSWERED.

Bumble Foot.—A. W., New Pittsburgh, Ind. "I have a cockerel that has a swelling under the foot and on the end of his toes. Give cause and remedy."

REPLY:—Due to jumping from a high roost, which caused what is known as "bumble foot." There is no remedy but to lance the foot should it be of the nature of an abscess.

Salicylic Acid for Preserving Eggs.—A. C. M., Middle Park, Ark. "How much salicylic acid is required for a gallon of water in preserving eggs?"

REPLY:—Dissolve two teaspoonsfuls of salicylic acid in six quarts of boiling water, and when cold, pour over the eggs. We do not recommend the process, however.

Quicksilver in Incubator Regulators.—J. E. M. W., Albany, Mo. "Is quicksilver or the expansive properties of confined air, when heated, used in any incubator regulating device?"

REPLY:—Quicksilver is used by several manufacturers, and so is the expansive properties of heated water, but we know of no incubator that is regulated by the expansion of heated air.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Book on Lawn-Tennis.—R. M., Waterford, Ohio. Send fifteen cents to Wright & Ditson, Boston, Mass., for the "Lawn-Tennis Guide."

Rye or Corn for Hogs.—H. M. D., Clayton, Mich. Rye makes good feed for growing pigs, but corn is much better for fattening them. The yield of rye per acre should be more than wheat on the same land.

Hen Manure for Garden Crop.—REPLY BY JOSEPH.—F. and F. W., ask whether this manure is suitable. I say it is most excellent for almost any crop that is grown in the garden. I always use all I can get for that purpose, applying as a top dressing after plowing and before harrowing. I use it in this way for onions, radishes, cabbages, lettuce, beets, spinach, celery, etc., and always with telling effect.

Alfalfa.—J. G. M., Dunn's, W. Va., wishes to know if alfalfa will do well on loose, sandy soil—creek bottoms. It would be well for you to experiment with alfalfa on a small scale at first. It requires a deep, porous subsoil. Having that, it will grow on a variety of soils. It will take about twenty or twenty-five pounds to seed an acre. It should be sown about corn-planting time, or a little earlier.

Cannery.—F. G. F., Rainbow, Cal., writes: "I want an estimate of cost of cannery, with capacity of 3,000 cans per day, and also ideas of best method of conducting our co-operative plan, applicable to a fruit community."

REPLY:—Probably Merrel & Soule, Syracuse, N. Y., manufacturers of apparatus for modern canning factories, can give you the information you desire. Write to them.

Planting and Blanching Celery.—J. C. M. R., McMinnville, Tenn., asks: "Should celery be set in trenches? When should it be hankled up for blanching?"

REPLY BY JOSEPH.—The general practice now is to set celery on the level, not in trenches. This latter plan, however, may be all right for southern latitudes. We begin to handle in August and bank in September.

Canning Corn.—B. Y., Gallatin, Mo. Salt to taste, put into tin cans and solder on the lid. With a fine punch make a small hole in each lid; then put the cans into a vessel of water—a wash-boiler will do. Then put in water enough to cover the cans, and boil rapidly for two or three hours. Take out the cans, solder the air-holes, and see that the soldering of the cans is perfect. The same process will do for peas and beans.

Coal Tar for Painting Shingles.—J. H. Strand, Iowa, writes: "What is mixed with coal tar to paint shingles with to make them fire and water proof?"

REPLY:—Coal tar and resin are carefully boiled to a pitch and the shingles dipped into the hot mixture. This will double the durability of the shingles and make them waterproof but not fireproof. Sand is sometimes sprinkled over a roof painted with coal tar.

Cecropia Emperor Moth.—W. H., Euclid. The large "butterfly" you send for name is a fine specimen of the Cecropia Emperor moth. It was hatched out from one of those large, grayish-brown, silken cocoons frequently found in the winter on shade or fruit trees. The young larvae are very voracious and devour the foliage of fruit and shade trees, but they seldom become numerous enough to do much damage, as they are such an easy prey to their enemies.

Cement for Cast-Iron.—W. H. M., Brandenburg, Ky. The following is recommended as a good cement for mending broken cast-iron: "Sal ammoniac, two ounces; flowers of sulphur, one ounce; clean, cast-iron borings or filings, sixteen ounces. Mix them well in a mortar, and keep them dry. When required, take one part of this powder and twenty parts of clean iron borings or filings, mix thoroughly in a mortar; make the mixture into a thick paste with a little water and apply it between the joints, and screw them together."

Paris Green for Potato Bugs.—C. H. S., De Soto, Mo., asks: "How much Paris green should be put in five gallons of water? Will this be liable to injure sweet potato plants?"

REPLY BY JOSEPH:—An ounce of Paris green will be sufficient for at least twelve gallons of water. Apply it as fine a spray as possible and keep the liquid well stirred. I do not see for what purpose this application should be made to sweet potato plants. If made, however, I do not think it would harm the foliage any more than it does that of the ordinary potato.

Sweet Wine.—J. B. F., Anthony, Kan., asks: "How can I make and keep sweet wine? I want to put it up for sacramental purposes. Can it be kept well in tin cans?"

REPLY:—Husman's "American Grape-growing and Wine-making," published by the Orange Judd Co., New York, will give you full information on the subject. Do not put it in the cans. Heat the wine, bottle it, put in good, dry corks, dip them in hot sealing wax; set the bottles aside overnight, then examine the sealing carefully for pinholes. If any are found, redip the bottles in hot wax.

To Get Rid of Ants.—E. W. D., Troy, N. Y., writes: "Tell me how I can rid my pantry of large, black ants. For three years they have come the last of April or the first of May, and would trouble me more or less during the summer, though most in these months."

REPLY:—If possible, find their nests. After that it will be easy to destroy them. One of the best things is bi-sulphide of carbon. If the nests are in the ground, pour in a little bi-sulphide of carbon, and carefully cover up the nest. The fumes of this volatile liquid soon penetrate all the underground galleries, and destroy every insect.

Onion Maggots.—J. P., Geneva, N. Y. In reply to your query about onion maggots we republish the following from FARM AND FIRESIDE: "These maggots are the offspring of the onion fly, which is somewhat similar to the common house-fly. Strong caustic lime water, if applied in sufficient quantity to soak down to the roots, will put an end to the pest, killing all maggots and eggs that it touches. The fly, when ready to deposit its eggs, seems to prefer radishes to cabbages, and these to onions, and if radishes or cabbages are planted here and there among the onions, the latter will usually escape. The 'catch' plants (radishes and cabbages) may be pulled up when infested with maggots, and destroyed."

Potatoes Running to Vine.—G. E. D., St. Louis, asks: How can we prevent ordinary potatoes from running all to vines?

Would it do any good to mow off the tips of sweet potatoes to make them bear better?"

REPLY BY JOSEPH:—Provide plenty of mineral plant-foods for your crop of ordinary potatoes, and do not plant in too shaded a position. I think that you will then have no reason to complain of more top than tuber. Sweet potatoes also need plenty of minerals. If the ground is excessively rich in nitrogen, the plants will make an excessive growth of vine. Mowing them off will do little good. All you can and should do is to prevent the vines from taking root all over the ground. Lift them up frequently with a fork or rake handle.

How to Calcimine—Time to Sow Herbs-grass and Bedtop.—B. H. P., Clifton Mills, Ky., asks: "How to calcimine a plastered wall?—When to sow herbsgrass and bedtop on ground now in corn?"

REPLY:—Soak one quarter pound of glue in warm water over night; add a quart of water and boil in a glue-pail, stirring until the glue is dissolved. To six or eight pounds of Paris white add, hot water and stir until it looks like thick milk; add the glue, stir well and apply thinly with a whitewash brush. If necessary, thin the wash with hot water. You can use various coloring materials. Ultramarine makes the best blue.—After you have laid your corn by, run through with a one-horse cultivator or harrow that will stir shallow and level the ground; then sow the grass seed. If the summer is a very dry one, you had better defer sowing it until the first of September.

Destroying Grasshoppers.—M. B. C., Moapa, Nev., writes: "Will you give some plan for the destruction of grasshoppers? They are very annoying in this part of the country."

REPLY:—Where the surface of the ground is smooth and hard, Dr. Riley says that heavy rolling can be successfully employed, especially in the mornings and evenings of the first eight or ten days after the newly-hatched young have made their appearance, as they are generally sluggish during these times, and huddle together until after sunrise. Another simple method is the coal-oil pan, which is described as follows: A good and cheap pan is made of ordinary sheet iron, eight feet long, eleven inches wide at the bottom and turned up a foot high at the back and an inch high at the front. A runner at each end, extending to each front corner, completes the pan at a cost of about \$1.50. The upper surface of the bottom is wet with kerosene, and the pan is pulled rapidly through the field by boys who take hold of the ropes. "Destructive Locusts," a bulletin recently published by the Department of Agriculture, Washington, D. C., will give you full information about the more injurious "grasshoppers" and the best means of destroying them.

VETERINARY.

Conducted by Dr. H. J. Detmers.
Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Warts on a Cow's Teats.—G. H. H., Brazilton, Kan. Please consult FARM AND FIRESIDE of June 15th.

Heaves.—C. W. J., Shelter Island, N. Y. Heaves is an incurable disease. You can ease the animal by feeding green food, grass and grain, and by giving no hay whatever. For further information I have to refer you to the numerous answers given to similar inquiries.

Lumps—Luxation of the Patella.—If the lump is in the way, have it excised; otherwise, leave it alone.—As to your second question, consult the numerous answers given to inquiries about luxation of the patella. Your question is too general to prescribe official treatment.

Ringbone.—R. D. K., Belair, Ga. The best season to treat ringbone is in the winter. Hence, wait until then, and look for directions in one of the November numbers. Perhaps the floor of your stable is very uneven. If so, by all means level it, so that the horse may be able to stand squarely on all four feet.

Paraplegia.—D. E. L., Ada, Ohio. The trouble (paraplegia) you complain of is caused by a morbid (paralytic) affection of the facial nerve, and in an old animal like yours is very likely incurable. The best thing you can do is to send the animal to pasture for at least six weeks or two months. Counter-irritants, as a rule, are useless.

A Wood Eater.—J. C. M. R., McMinnville, Tenn., writes: "I have a horse five years old and in good condition. But I cannot catch him near a plank fence, for he is biting on the plank all the time. He seems to have a mania for eating wood. He does not lack for food; he has what he can eat all the time. I ride and hitch him every day, from morning till noon and noon until night, but always feed when I eat."

REPLY:—What you complain of is probably nothing but a bad habit, and in that case you can hardly do anything but put a muzzle on your horse as soon as you tie him.

Weak in the Pasterns.—A. M. W., Wilkes-Barre, Pa., writes: "I have a colt coming four years old, which I have been driving considerably of late, and he is getting cocked ankles, if that is the proper term. He is quite bad on being driven, but his ankles straighten back on standing."

ANSWER:—If your colt is too weak in the pastern joints, you must not work the same, but give him rest or only voluntary exercise, and feed ample quantities of suitable, sound and nutritious food, such as is well calculated to build up muscle, bone and sinew.

Mitritis.—J. G., Neely, Ark. Your mare suffers from severe chronic mitritis, caused by abortion. Inject into the womb, very carefully of course, with a suitable syringe, first, a sufficient quantity of clear, warm water (of a temperature of 100°) to remove the mucous and purulent secretions, and then inject, at least once or twice a day, with either a solution of corrosive sublimate (1 to 1,000 or 1,500) or a solution of carbolic acid (1:70), also of a temperature of 100°. If you use the corrosive sublimate solution, you must not use a metallic syringe. A rubber syringe is the best. Leave the mare in the pasture, and do not breed her until she has fully recovered.

Tender Feet.—J. N. B., Leslie, Tex., writes: "I have a horse that is very tender footed. Upon examination I found under the bottom of his foot an unnatural growth of hoof. It grows out in the wln that divides the soft

part of the hoof from the hard, and is about as thick as a knife blade, and one inch long and turned in towards the frog. He has never been shod. We have no rock; therefore, we never shoe unless we have a tender-footed horse."

ANSWER:—Your horse, it seems, needs shoeing. Concerning the "unnatural" growth, I am inclined to think you may be mistaken and may have looked upon the bars as unnatural. Take your horse to a good horse-shoer and get him shod.

Lymphangitis.—E. C., Alanson, Mich., writes: "My mare had her leg swelled up ten weeks ago. One week after it broke and ran about seven weeks. It broke on the ankle joint on the inside of the leg."

ANSWER:—Since you have treated the animal for over ten weeks in vain, it is exceedingly doubtful whether you will ever effect a cure. Therefore, the best you can do is to commit the treatment to a competent veterinarian. The result of the treatment of such a case does not depend so much upon the medicines used as upon the manner in which they are applied, and the care that is bestowed upon the animal. All ulcers and sores require a strictly antiseptic treatment, and all chronic swellings of a leg require judicious bandaging.

Blind.—G. A. T., Fleming, Tex., writes: "I have a three-year-old horse that I castrated about one month ago. He died a great deal. That night there came a heavy rain. He was out in the weather. Next morning he was blind. There was, and is yet, a gray scum or covering over the eye. He cannot see at all. He is well except his eyes."

ANSWER:—If the opaque cornea presents a gray, leaden, cream-like or yellowish color, the case must be considered incurable. Only when the same is yet sky-blue the transparency may be restored by the use of suitable eye waters. A solution of nitrate of silver in distilled water (1:20), applied three times a day by means of a small pipette, capped with a rubber bulb, usually answers the purpose.

Wants to Know What Kills the Calves.—A. G. H., Glendale, N. Y., writes: "I want to know what killed the calves. I lost three last spring and one this spring, and another is sick the same as the others were. When about two months old they refuse to eat their full mess of milk, begin to breathe hard, and rather fast, will sweat across their shoulders for about one day, will grow worse and breathe harder until they die."

ANSWER:—Your description is very incomplete. The symptoms you communicate indicate some lung trouble. You ought to have made a post-mortem examination, and then a good description of the morbid changes presented would have made the diagnosis easy and reliable.

Chronic Inflammation of the Elbow.—A. V. B., Jutland, N. J., writes: "What is the matter with my mare?" About one year ago I first saw that she seemed to have difficulty in passing water; would make him a little at a time. Often she got sore between her legs. Her water seems to be poisonous to her flesh. When I began to work her this spring, she began to have difficulty again. In passing water it will dribble over her legs."

ANSWER:—You will find it difficult to effect a cure. You may give once a day, from half an ounce to an ounce of hydrochlorate of potash, and if a good veterinarian is available, he may make injections of a solution of nitrate of silver in distilled water directly into the bladder; but only a veterinarian should attempt to make these injections.

Hogs Paralyzed in the Hind Quarters.—L. D. M., Tyrone, Md. Your hogs, very likely, have not received suitable food; in other words, have been fed on food destitute, or almost destitute, of lime salts, but especially of phosphate of lime. Besides that, they probably had not sufficient exercise. Therefore, if possible, feed your hogs with something that contains a sufficient amount of phosphate of lime and other mineral constituents—bray, for instance—and give them all the exercise they are able to take. Besides that, keep them on dry ground and provide their sleeping places with sufficient bedding. The medicines which you have given internally can do no good, and some of them are even injurious. If the paralysis in the hind quarters is perfect or nearly so, a recovery is exceedingly doubtful, no matter what you may do.

Worms.—A. G., Ratlo, Mich., writes: "I have a four-year-old mare that is troubled with large, round worms. Every few days she discharges sciae." **ANSWER:**—Have four pills prepared, composed each of tartar emetic, one drachm; of powdered licorice root and powdered marshmallow root, each two drachms, and of water as much as is necessary to make a stiff dough. Tell the druggist to make the pills in shape of a cylinder (or of a cartridge), and to wrap each in a small piece of tissue-paper, so that the pills may not stick to your fingers when you give them. Then give two of the pills in the forenoon and two in the afternoon; but give the horse nothing whatever to eat during the day on which the medicine is given. After that, feed good, wholesome and nutritious food, and do not permit the animal to drink any water from stagnant pools or ditches.

Pruritus.—G. M. K., Molers, W. Va., writes: "Please tell me what is the matter with my four-year-old mare that has been troubled her third and fourth summers with an itching and bump, or pimplies, varying from almost nothing to a few the size of cherry seeds. It comes on her in warm weather and fly time, and is at its worst when the weather is warmest and the flies bite her most. Then on her breast the hair either comes off of the bumps or she rubs it off, leaving the bumps with a dry appearance. It is on her front legs, in places, from breast to hoofs. Below the knees she bites occasionally until the blood oozes. She is troubled at times on other parts of her body when her breast and legs are worst. If I drive her till she gets warm, when she is troubled with this disorder, it makes it worse. After stopping, she will go to biting herself, and it seems sometimes to annoy her while traveling."

ANSWER:—The disease you describe seems to be pruritus. The treatment consists in thorough grooming and in washing, once a day, the affected parts with a solution of corrosive sublimate in water, one part of the former to 500 parts of the latter, or about 15 grains of the sublimate to 16 ounces of water.

These washings may be operated several days in succession, or until the pimplies disappear.

Food easy of digestion is advisable.

Arthritis.—A. B., Gibson, Mich., writes: "We have a colt seven weeks old at this writing. The first three weeks it was all right, but since then something has been the matter with it. It is stiff and lame in its left hind leg, but just where the trouble is I don't know. It acts as if it were in pain, but there is no swelling or fever that I can discover. If I put my hand on its thigh or buttock, it will shrink some. Its left foot and the lower part of its leg are cold. It doesn't put its foot on the ground any more than it has to. When it first got hurt it was stiff in both hind legs, but it is only the left now. When I lift its foot, the stiffness seems to be in the whole leg."

ANSWER:—Your colt suffers from so-called "rheumatic" arthritis. If it is not yet too late, you may rub in once a day on the affected joint or joints, a mixture of tincture of iodine and tincture of cantharides, equal parts. Of course, you first have to ascertain the seat of the morbid process. At the same time it is very advisable not to work the mare too hard and not to feed her too heavy food, nor to keep her away too long from the colt. One can never expect to raise a healthy, good colt of a mare that is treated like a draft horse or like a roadster. Tincture of iodine will temporarily stain the hands. If you mind it, you may cover your hand with a piece of bladder while applying the tinctures.

hoof-expander, I do not know what it is. Perhaps it is an imitation of Defs' instrument. If so, it will be all right if carefully used. The best remedy for contracted hoofs is to remove the shoes and give the horse the benefit of a run at pasture during the whole summer.

Grease-Heel.—J. P. F., Grapeland, Tex., writes: "Are foot-evil and grease-heel in horses the same? My family horse was attacked with a disease of his left hind foot. A little running sore, about the size of your thumb-nail, appeared on his heel. In twelve hours it went around his hoof where it connects with the hair. His ankle is swollen but little. His hoof seems to be separating from the flesh. What is the matter, and what ought I to do?" Answer immediately."

ANSWER:—An immediate answer, for reasons repeatedly stated, can be given only if a fee of one dollar is

Our Miscellany.

I could smile at the grave
Of my friends; couldn't you,
If you knew that from heaven
They smiled back at you?

—*Spokane Falls Review.*

"LIKE as the waves make toward the pebbled shore,
So do our minutes hasten to their end,
Each changing place with that which goes before."

A LITTLE ONE FOR PRACTICE.

And he was a reader of the mind,
And she a maiden fair;
"So let me read your mind," said he,
With a way quite debonair.

"Nay, do not try," the maiden said,
"To read a mind that's grown.
Try first a small and simple one;
Pray, try to read your own."

MEN need moral courage more than they do higher foreheads.

THERE is glory in anything you do simply from a sense of duty.

REPENTANCE never comes too late, if it comes from the heart.

FOR weak eyes, a wash of weak salt water will prove of much benefit.

IF an alligator could talk, he would probably declare he had a small mouth.

HEALTH may be wealth, but it is pretty hard to make the doctors believe it.

CORN in the field is shocked, and when it is made into whiskey it is shocking.

No matter how well a counterfeiter is brought up, he always turns out queer.

SALT water, quite strong, used persistently for a time, will prevent the hair from falling out.

How many people there are whose souls lay in them like a pith in a goose quill!—*Josh Billings.*

GEN. HOWARD says that at the close of the war Gen. Sherman could probably call 5,000 officers by name.

A TEASPOONFUL of salt dissolved in one half glassful of water, is excellent to allay nausea in sick headaches.

To relieve heartburn, drink half a tumblerful of cold water in which has been dissolved a tablespoonful of salt.

CLAY county, Mo., will be represented at the world's fair by a span of mules eighteen hands high and which weigh 3,800 pounds.

SINCE the establishment, in 1802, of West Point Military Academy, 3,384 men have received diplomas from that institution.

WHEN wiping up the floor before putting the carpet down, sprinkle it over with salt, while damp; this will greatly prevent moths.

ACCORDING to the last census about 25 per cent of the entire population of the country live in cities having a population of 8,000 and upward.

EVERY day is a leaf in life. When the day dawns it is a blank. There is inscribed thereon our thoughts, words and actions.—*Tucson (A. T.) Star.*

THAT which is easy to do, though it may be worth doing, is not so important as that which is hard and disagreeable, and which therefore finds fewer workers.—*Baltimore Sun.*

THE period of "a generation" has been lengthened; it used to be 30 years, and later increased to 34; now a scientist says the average term of human life has increased in the last 50 years from 34 to 42 years.

WITH about the same area as the United States or Brazil, China's population is seven times that of one and forty times that of the other, and they are dying without the gospel at the rate of a million a month.

WE will mail free to any address, a copy of our Home Treatment, a positive cure for Lennorheia, Whites and all Female Weakness. Send self-addressed, stamped envelope. May Flower Med. Co., 85 Lake St., Chicago.

THE smallest of all the states, Rhode Island, has the largest population per square mile, or 318.44 persons. The figures of the last census show that if the whole Union were as densely populated it would contain 945,766,800 inhabitants.

BETWEEN old friends: He—"Why are you going to Europe?"

She (frankly)—"To secure a husband. And you?"

"To get away from my wife."—*New York Tribune.*

IT is not every boy that can make a bicycle for himself. Yet that is what a sixteen-year-old negro boy of Georgia, a blacksmith's apprentice, has done. He made the bicycle out of raw metal picked up in the shop, and it rides as smoothly as a factory-made machine.

ACCORDING to all reports there never was a better prospect of great crops of cereals in the United States than at the present time. We trust that this promise of bursting barns and granaries will not give pain to the able political economists who have demonstrated to their own entire satisfaction that short crops are better than full ones for the farmers.

BEECHAM'S PILLS cure Sick-Headache.

THE French woolen industry requires annually about 220,000,000 pounds of raw wool. Of this quantity France only produces one fifth; the remainder is supplied chiefly by Australia and La Plata. The French wool is grown in the central and southern departments.

THE brightness of the moon is not so very much greater than the brightness of the same area of sky. The total light of the full moon can be compared with the total light of the sun, though it is a very difficult problem, and the result will be that the sun is as bright as 680,000 full moons.

A WYOMING man has settled the question of how the prairie dogs obtain the water they drink. He says they dig their own wells, each village having one with a concealed opening. He says he knows of several of these wells from 50 to 200 feet deep, each having a circular stairway leading down to the water.

"YES," said the mother, complacently, "Jane is married, and married well. It was through having her portrait painted that she got acquainted with her husband."

"Indeed! Did she marry the artist?"

"The artist? I guess not. She married the frame manufacturer."—*New York Press.*

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KANSAS.—(Manhattan) Bulletin No. 18, December, 1890. Experiments with forage plants. Bulletin No. 19, December, 1890. Germination of weeviled peas. Garden notes on potatoes, beans and cabbage.

NEW HAMPSHIRE.—(Hanover) Second annual report, 1890. Bulletin No. 13, May, 1891. Effect of food on butter. Effect of food on quantity of milk. Bulletin No. 14, May, 1891. Ensilage in dairy farming.

NEW YORK.—(State Station, Geneva) Bulletin No. 32, June, 1891. Description of material used in making commercial fertilizers. Fertilizing materials produced on farms. Fertilizing composition and valuation of various products.

ONTARIO.—(Agricultural College, Guelph) Bulletin No. 42, April, 1891. Bark-louse and pear-tree slug. Bulletin No. 43, May, 1891. Pitting the sugar beet.

ONTARIO.—(Central Experiment Farm, Ottawa) Bulletin No. 11, May, 1891. Recommendations for the prevention of damage by some common insects.

SOUTH DAKOTA.—(Brookings) Bulletin No. 25, June, 1891. Glanders.

TENNESSEE.—(Knoxville) Bulletin No. 2, Vol. 4, April, 1891. The peanut crop of Tennessee. Statistics, culture and chemistry.

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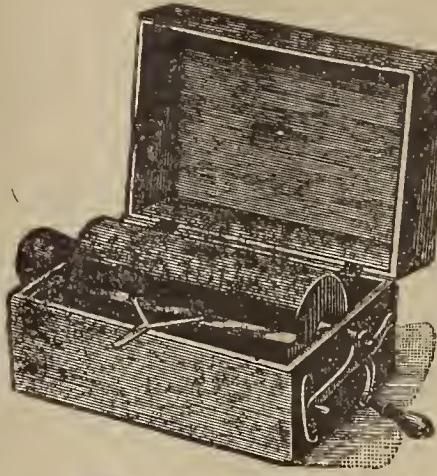
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CONTENTS.	Dear heart,	Happy new year.	Le Petre's hornpipe.	Petronella.
Alas! those chimes.	De hanjo am.	Harp that once.	Light artillery.	Polly wolly doodle.
Annie Laurie.	Devil's dream.	Heel and toe. polka.	Liverpool hornpipe.	Soldier's joy.
Arkansas traveller.	Drunken sailor.	Hey, daddy.	Lord's my shepherd.	Spanish dance.
Auld lang syne.	Durango's hornpipe.	Highland fling.	Madrinaine, La.	Speed the plough.
Basket of loves.	Eight-hand reel.	Hong Kong sweet home.	Mary of Argyle.	Spirits of France.
Battle prayer.	Ermine gavotte.	Imperial, L.	Minuet.	Suu of my soul.
Beau of Oak Hill.	Ermine jullaby.	Jasmine's heart.	Miss McLeod's reel.	Tempo, The.
Beaux of Albany.	Esmaraldo, The.	Fairy dance.	Money Musk.	Tempete, La.
Beautiful castle.	Felicity.	Fairy vienvienna.	Mother's song.	There is rest.
Belle Canadienne.	Flemish hornpipe.	Favorite dance.	My pretty pearl.	Thunder hornpipe.
Bonnie blue flag.	Fondue.	Fairy varsovienne.	Now, as we're strong?	Uncle Dan'l's.
Bonnie Doon.	Forrest's dance.	Favorite dances.	Old carmen me rock.	Uncle Sam's farm.
Boston dip waltzes.	First love redowa.	Fairies.	Old osken bucket.	Rock of ages.
BOSTON DIP.	For the hand reel.	Fritz's lullaby.	Old rosin, the beau.	Russia, La.
Catch-me-to-Lee.	Gavotte de Vestrie.	Gavotte de Vestrie.	Old zip coon.	Sailors set on shore.
Catch-me-to-Lee.	German, The.	Kitty O'Neil jig.	Only.	St. Patrick's day.
Chained at last.	German redowa.	Ladies' triumph.	On the hanks.	Scottish dance.
Chinese march.	German waltz.	Lady of the lake.	Opera reel.	Shells of ocean.
Chorus jig.	Giant's hornpipe.	Lancashire clog.	Our first and last.	Sicilienne, The.
College hornpipe.	Gintana waltz.	Oyster river.	Over the water.	Sicilian circle.
Comin' thro' the rye.	Girl I left behind.	Go to the D—.	Poverty.	Silent night.
Coquette.	Guitar.	Larry O'gaff.	Six-hand reel.	Zulma.
Cuckoo, The.	Keep the horseshoe.	Dashing white sergeant.	Last rose of summer.	Soft music is stealing.
Curry from Kildare.	Kendall's hornpipe.	Dick Sand's hornpipe.	Light in the window.	Sommabula quickstep.
Blue bells of Scotland.	German.	Don't drink, to-night.	Maid in pump-room.	Sparkling dewdrop scho.
Campbells are comlig.	German.	Douglas' hornpipe.	Minnie Foster's clog.	Steamboat quickstep.
Campton hornpipe.	Cau you keep a secret?	Electric light galop.	Newport or Narrangas' t.	'Tis true, we're fading.
Cau you keep a secret?	Carillon de Dunkerque.	Fisher's hornpipe.	Oh, yon little darling.	Vinton's hornpipe, No. 1.
Charley over the water.	Charley over the water.	Flowers of Edinboro'.	Pop goes the weasel.	Vinton's hornpipe, No. 2.
Cincinnati hornpipe.	Constitution hornpipe.	Flowers of Edinburgh.	Shunster's hornpipe.	Where many mansions.
Cookhouse on the hearth.	Critchett on the hearth.	Fra Diavolo quickstep.	Lady Walpole's reel.	Woodman, spare that.
		Fred Wilson's clog.	Lamplighter's hornpipe.	

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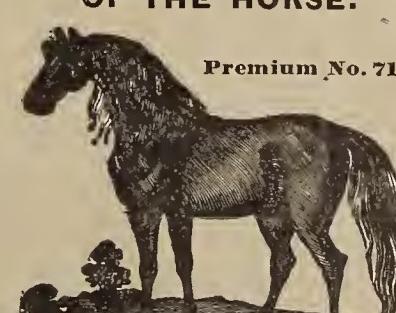
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Smiles.

EIGHTY PER CENT HONEST.

Oh, dear to our heart is the bright silver dollar,
With liberty's picture, just turned from the
munt,
And the national bird with his high ruffled
collar,
As if he would fight if you gave him the
hint.

The old Yaukee dollar,
Our father's big dollar,
Made out of just eighty cents at the govern-
ment mint.

—Journal of Finance.

NEGRO PHILOSOPHY.

HEARD a bit of dialogue ou a rail-
road train a few days ago which
contains a whole cyclopaedia of in-
formation into the mental pro-
cesses of the colored man and brother. There was wit, philosophy and the
two besetting vices of the race all concen-
trated into a few sentences.

"Dooa happen to have wo match 'bout yo'
clothes, eh? If yo' got a Pittsburg stogy,
it'll dojes' as well."

"Go long, niggah! What do yo' do with all
yo' money?"

"I wouldn't like to tell, I There's too many
people heah."

"Did yo' drink it?"

"No, sah."

"Did yo' gamble it?"

"P'raps I did. Don't know but what I did
gamble it—kiah, kiah!"

"I'd sooner drink it ef it was me—kiah,
kiah!"

"Yo' better not. Yo' live a good deal longer,
honey, ef yo' gamble lt."

General laughter and the Pittsburg stogy
passed over.

AN AUTHORITATIVE DECISION.

Tommy came running to his father one day
with a weight of trouble on his mind.

"Sadie says the moon is made of green
cheese, pa, and I don't believe it."

"Don't you believe it. Why not?"

"I know it isn't."

"But how do you know? Don't ask me that
question; you must find out for yourself."

"How can I find out?"

"You must study into it."

He went to the parlor, took the family Bible
from the table and was missed for some time,
when he came running into the study.

"I have found it out, for the moon was
made before the cows were."—*Life.*

HE WOULDN'T BITE.

The boy's fishing-pole was fastened under
the root of a tree on the river bank, and he
was sitting in the sun playing with a dog.

"Fishing?" inquired a man passing along
the road.

"Yep," answered the boy as briefly.

"Nice dog you've got there. What's his
name?"

"Fish."

"Fish? That's a queer name for a dog. What
did you call him that for?"

"'Cause he won't bite."

Then the man proceeded on his way.—*Wash-
ington Star.*

AMERICANS MUST BE CAREFUL.

Standish—"What's that? You say you were
attacked by highwaymen on the way here?"

Winthrop—"Yes, and robbed of every cent,
after being beaten insensible."

Standish—"Honest citizens ought to go
armed."

Winthrop—"I was armed."

Standish—"Then why didn't you shoot?"

Winthrop—"I was afraid some of the high-
waymen might be unnaturalized residents,
and I did not wish to risk plunging my be-
loved country into a foreign war."—*New York
Weekly.*

TWO BABIES.

Mrs. Newma—Oh, I wish you could see Mrs.
Winkler's baby. It's perfectly lovely. Such
a delicate, sweet little creature as it is. It's a
perfect little cherub, with the loveliest eyes,
the sweetest little mouth, the cutniest little
nose, and eyes of heavenly blue. It looks as
if it had just dropped from heaven and every
tiny feature had been fashioned by the
angels."

Mr. Newma—"Is it as nice as our baby?"

Mrs. Newma—"Mercy! no, not half."—*New
York Weekly.*

NOT GOING AROUND THE FAMILY.

Teacher—"You must not come to school any
more, Tommy, until your mother has recov-
ered from the small-pox."

Tommy—"There ain't a bit of danger. She
ain't going to give me the small-pox."

Teacher—"Why, how is that?"

Tommy—"She's my step-mother. She never
gives me anything."—*Texas Siflings.*

TO THE PACIFIC COAST.

Go to California via the through lines of the
Burlington Route, from Chicago or St. Louis
to Denver, and thence over the new broad
gauge, through car line of the Denver and Rio
Grande Railway, via Leadville, Glenwood
Springs and Salt Lake, through interesting
cities and unsurpassed scenery. Dining Car
service all the way.

TOO THIN.

"I'll just tell you what it is," remarked a fat,
jolly old soul to her companion as the street
car rumbled along, "the doctors kin say what
they please, but I know it's just flyng in the
face o' natur' to bring a baby up ou a bottle.
You know Sally Anu-Jimson, what lives next
door to us?"

"Yes," assented the other.

"Well, she tried to bring her baby up on
milkman's milk, and it died of water on the
brain."—*Philadelphia Record.*

ARBOR DAY A HUMBUG.

"Do you know, Mr. Editor," writes a far-
seeing school-boy, "that this Arbor Day busi-
ness is the grandest humbug on earth? What
are these trees plauted for? To make the
ground look purty? Naw. To furnish shade
for the girls? Nix. They are to make switches
to harrass the small boy's hide; and don't
you forget it. If this ain't so, why do they
plant maple trees, which grow the straightest
switches that ever shook the dirt out of a boy's
pants?"

IN THE HOTEL BUSINESS.

"James, I don't see you waiting at the table
any more."

"No, sah; I've been promoted. I've entry
clerk now."

"You an entry clerk! I never knew you
were a book-keeper."

"Oh, I ain't. I jes' keep my eye on de um-
brellas, hats and things de bo'ders leave in the
entry.—*Kate Field's Washington.*

REBUKING A FLIPPANT BOARDER.

"They say it costs \$17.50 a week to feed an
elephant, Mrs. Irous," said the boarder at the
foot of the table. "How would you like to
board one at regular rates?"

"An elephant, Mr. McGinnis," replied the
laudlady, "wouldn't be throwing out hints all
the time that he was getting tired of prunes."

A BUSINESS HEAD.

Husband—"I save four dollars by buying that
cigar by the box."

Wife—"Do you, Jack? How nice it would
be if you would only buy five boxes right
away and give me the twenty dollars you save
for a new dress."

HE CARRIED THEM LONG ENOUGH.

Postmaster—"So you would like a position
as letter carrier. Have you ever had any ex-
perience?"

Applicant—"Yes, sir; my wife has always
given me all her letters to post. You might
ask her."

UNDIVIDED AFFECTION.

"Will you marry me?"

"Do you love me for myself alone?"

"Why, of course. Did you suppose I loved
you for the sake of your six maiden aunts and
four old maid sisters? Don't be unjust, Clara."

A FAMILY AFFAIR.

Young mother—"What in the world makes
the baby cry so?"

Young father—"I guess he heard me say I
managed to get a little sleep last night."—*New
York Weekly.*

SHE DIDN'T MEAN RACY.

Customer—"Are these colors fast?"

New salesman—"Well, black is never con-
sidered a fast color, but we have some pretty
loud variegated colors that might please you."

TRIUMPH OF ART OVER NATURE.

"What a terrific thunder-storm we had the
other evening!"

"I didn't know anything about it until it
was all over. I was at the Wagner concert."

A REASONABLE PROPOSITION.

Bragg (pompously)—"Sir, I am a self-made
man."

Flagg—"I dare say you look like the kind of
a man you'd be apt to make."—*Life.*

A DIVISION.

"Henry," she whispered, "let us take for our
motto 'Work and pray.'"

"All right, my dear," he answered; "I can
pray pretty well."

LITTLE BITS.

He—"Tell me what you think of my last
poem. I want to finish it, as I have other irons
in the fire." She—"I should withdraw the
irons and insert the poem."—*Life.*

Anxious mother—"As I passed the parlor
door last evening I saw Mr. Nicefello's face
very, very close to yours."

Lovely daughter—"Y-e-s, ma, he's so near-
sighted."—*Good News.*

"Do you quarrel with your neighbor yet
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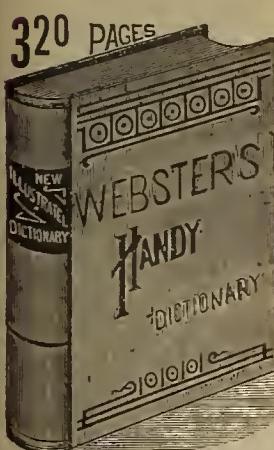
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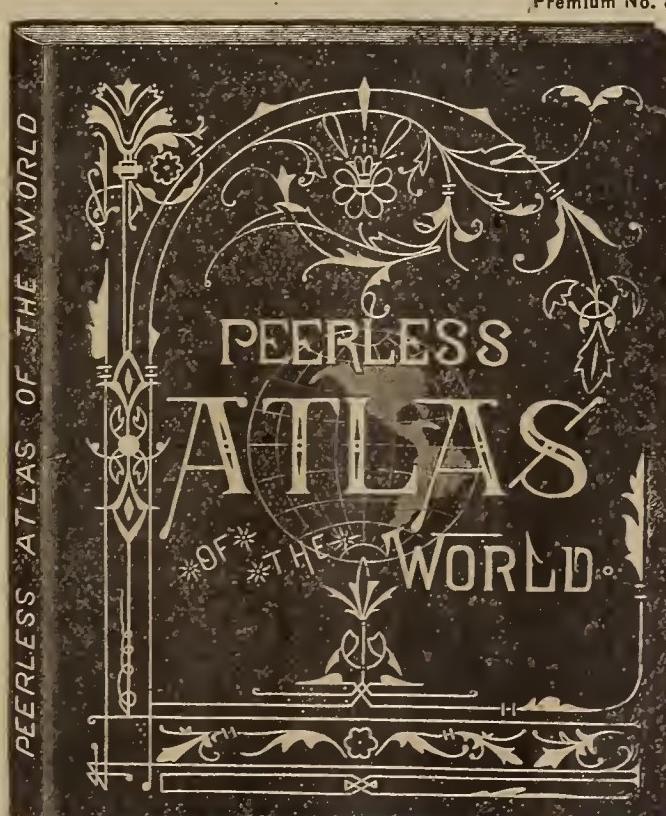
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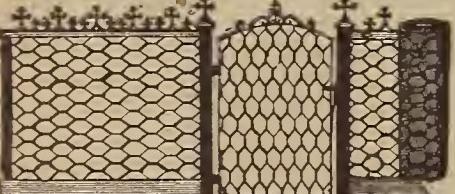
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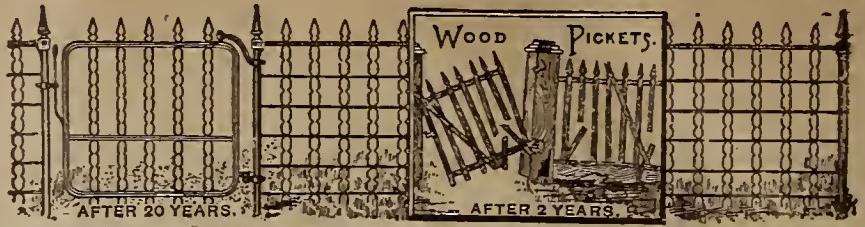
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Journal in the World.

Current Comment.

BELIEVING that they can accomplish more in that way than in any other, FARM AND FIRESIDE has approved of the policy of Ohio farmers going to the primaries and caucuses of their respective parties and securing the nomination of men who will look after the interests of agriculture in the state legislature. It does not make much difference to what class the nominees belong, whether they are farmers, merchants or professional men, provided they are the right kind of men. Good, wide-awake farmers should be the first choice. It stands to reason that they would take a deeper interest in all measures affecting agriculture. If one party selects the right men, and the other fails, then let the votes be cast irrespective of party lines. If farmers unite on this plan they can easily bring both to terms. It is plain to anyone of good, common sense that they can accomplish more by this plan than by frittering away their votes on any so-called farmers' party. The politicians are alarmed over the success of the farmers in the last legislature, secured in just the way mentioned, and they would like to see a new, third party in the field. They are willing to take the chances of working it in the interests of their own party, with the result of leaving all the farmers out in the cold on election day.

In an interview with a representative of a New York daily, the governor of Ohio said, referring to the state legislature to be elected next fall:

"That body will contain enough of both Democrats and Republicans, elected as such, but who are stanch members of the Farmers' Alliance, to prevent any legislation supposed to be against the interests of the farmers, and to prevent the election of any man to the United States senate who is distasteful to that element. Understand me, the Alliance itself will not elect any person to the general assembly, perhaps, but a number of the counties will send representatives, equally distributed between the two great parties, who are active members of the Alliance, and who will not submit to any caucus decree which looks to the election of a senator supposed to be antagonistic to their interests. This applies with equal impartiality to both parties, in my judgment."

Commenting on this, another New York paper says:

"We don't know, or care, how many votes the Alliance can contribute to Democratic or Republican candidates in the Ohio legislative districts. A support which imposes conditions so humiliating will be clearly bought. If the Alliance can elect representatives, it has the privilege of doing so, but an Alliance Republican is not a Republican nor is an

Alliance Democrat a Democrat if he postpones the wishes and the interests of the Republican party or of the Democratic party to those of the Alliance.

"The Ohio Alliance scheme is a great scheme for the Alliance, but a dangerous one for the genuine Democrats and Republicans. The principles and the purposes of the Alliance are not and cannot be those of the Republicans or the Democrats."

Although it contains an error about the political movement of the Ohio farmers being an Alliance scheme, here is a clear recognition of the fact that the farmers are doing the best for themselves regardless of the interests of the politicians.

THE experiment station of Cornell University recently issued an important bulletin on the production and care of farm manures.

A series of investigations were made to determine the loss in stable manures by exposure in open barnyards. In one experiment, two tons of horse manure, mixed with straw bedding, were put in a place exposed to the weather where the drainage was so good that all water not absorbed by the manure ran through and off at once.

Chemical analysis of samples showed that the two tons of fresh manure were worth \$5.60. At the end of six months the weight had decreased from 4,000 pounds to 1,730 pounds, and the value to \$2.12.

In summing up the results of this and similar experiments, the bulletin says: "It seems safe to say that under the ordinary conditions of piling and exposure, the loss of fertilizing materials during the course of the summer is not likely to be much below fifty per cent of the original value of the manure."

Comment is hardly necessary to call attention to the enormous waste that is daily going on in the open barnyards of the whole country.

As the manure has to be handled and applied anyway, this waste is a net loss. The value given is based on the prices of nitrogen, phosphoric acid and potash in commercial fertilizers. So the net loss in dollars and cents may be more or less than given above, in different localities.

For preventing the loss from firefanging and leaching, where manures are not taken direct from the stable to the fields, cheap manure-sheds are recommended. A description and illustrations of inexpensive sheds for this purpose will appear in our next number.

IN an article on the outlook for higher prices for wheat, *Bradstreet's* gives some very encouraging figures. It calls 500,000,000 bushels a moderate estimate for the new crop. As there is a surplus on hand, carried over from last year, practically all this amount will be available for food, seed and export.

The Department of Agriculture estimates that this country will need 302,000,000 bushels for use as food at home, and 55,000,000 bushels for seed; in all, 357,000,000 bushels. This will leave 143,000,000 bushels for export. If the crop exceeds the estimate given above, the export surplus will be increased by a like quantity.

As to the outlook for prices, the coming wheat year promises to favor holders of wheat. Europe must import large quantities in excess of what she has taken in previous years, owing to crop failures.

The annual average exports from the

three leading exporters for the past three years has been 112,000,000 bushels from Russia, 105,000,000 bushels (including flour as wheat) from the United States and 26,000,000 bushels from India. This is a total of 243,000,000 bushels, or many million bushels less than the wheat-importing countries of Europe require. India will probably export her average, and Russia probably the same. If so, the United States can make up the European deficiency, but the price for months to come will not likely favor the buyers. Europe has got to purchase more wheat within a year than ordinarily; the world knows her needs, and the excess stocks for which she must apply will be in relatively few hands.

From the foregoing it will be seen that all the conditions are remarkably favorable for this country. Our crop is a super-abundant one. There is a market ready waiting for it. Our wheat exports will undoubtedly be the largest ever known. A good price is certainly assured, with a possibility of a high one. Europe has a large deficiency which must be supplied from this country.

From January to July, Europe drew from this country an abnormally large amount of gold—over \$65,000,000. Our grain exports will bring it all back and much more besides.

When the new wheat crop first comes into market, the buyers and speculators will endeavor to their utmost to crowd down the price. There are so many farmers who are under the absolute necessity of realizing on their crops as soon after harvest as possible that there is always an opportunity for buyers to take advantage of the situation and hear down the price. There is danger of overcrowding the early market, forcing down the price and giving all the advantage of the prospective high price to the speculators.

There is good reason for believing that the wheat crop, both as to quantity and quality, has been overestimated, and it will be advisable for the producers to carefully consider the question of holding for better prices than are first offered.

THE present crop of money schemes is very large. The value of the crop is very small. A subscriber who has "discovered" that we have "a very erroneous idea of money," presumably from our declarations in favor of good money and plenty of it, sends us one of the latest productions. It is called common sense money, and is to consist of "certificates of production." It is to be paper money, of course. In the revival of fiatism nothing goes but paper. But this new money is not exactly fiat money, nor is it "evidence of debt" money. The sample certificate enclosed in the letter is similar in size and shape to a bank note, and reads as follows:

CERTIFICATE OF PRODUCTION.

THIS IS TO CERTIFY
THAT THE BEARER HAS
PRODUCED
TO THE AMOUNT OF ONE DOLLAR,
AND IS THEREFORE
ENTITLED TO AN EQUIVALENT.

It is unsigned; it does not say who does the certifying; but inventors do not stop to consider a little thing like that. Let us charitably assume that the government is to issue and sign them. How are they to

be put into circulation? The inventor says: "The employees of the government are producing for the general good. Let the government cease to take up the old certificates (money) by taxation and print new certificates and hand them out to the employees until there is at least \$50 per capita in circulation. These certificates should be printed upon some material of which there is plenty, and in such a way as not to be easily counterfeited. Who knows of anything better than paper?"

There you have the great scheme in a nutshell. *No more taxation!* Think of that! And then, by paying off its appropriations with those certificates of production, the government could annually add a billion to the circulation. Such a scheme ought to satisfy the wildest enthusiast for paper money in unlimited quantities.

UNDER the heading "Our Farmer Fathers," the *Tribune*, Minneapolis, says:

"It is sometimes well to look back over the road, take bearings, and measure progress. When we find farmers and laborers politically in arms against alleged oppression and hard times, we naturally turn to view the conditions of 'the good old times' when everybody was prosperous and contented.

"The farmer of the day makes two special complaints: High prices for what he buys, and low prices for what he sells. How was it with our farmer fathers?

"Take the staple dry-goods article, calico. In 1790 it cost 58 cents a yard; in 1830, 29 cents; in 1860, 11 cents; in 1891, 5 cents.

"Take the staple grocery article, sugar. In 1790 it cost 18½ cents for cheap, brown grades; in 1830, 15 cents; in 1860, 10 cents; in 1891, 5½ cents for granulated.

"For what the farmer sells, take the staple dairy product, butter. The prices in Massachusetts are as follows: In 1790, 11 cents; in 1830, 18 cents; in 1860, 26 cents; in 1891, 30 to 35.

"The staple meat product, dressed beef, in Massachusetts sold in 1790 at only 3½ cents; in 1830, 7½ cents; in 1860, 12 cents; in 1891, 12 to 18.

"Our farmer fathers of revolutionary days whistled among the stones and pumpkin vines of sterile New England, attired in cotton jeans and shirtings that cost 50 cents a yard, slept on ticking at 90 cents, and, if rich enough, wiped the perspiration from their brows with handkerchiefs that cost 70 cents. Their wives, if unusually stylish, paraded in muslin at 75 cents, ginghams at 55 and cambric at \$1. Pins were 15 cents a paper; for matches, everybody borrowed fire; and for farm implements and machinery, the hoe and scythe were as all-important as to-day's sulky plow and self-binder.

"Those were the 'good old days' when there were no debts nor Donnellys, no machinery nor mortgages, and few products, profits, Peffers or People's parties. Yet, what the farmer sold brought not much more than one half what it brings to-day, and what the farmer bought cost more than double what it costs to-day."

THE twenty-third session of the American Pomological Society will be held at Washington, D. C., on the 22d, 23d, 24th and 25th of September, 1891. The secretary, G. B. Brackett, of Denmark, Iowa, will send official program on application.

FARM AND FIRESIDE.

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Our Farm.

COMMENTS ON CURRENT AGRICULTURAL LITERATURE.

BY JOSEPH (T. GREINER.)

ROUGH ON RATS.—The damage done by rats and mice and similar pests on farms and in households in the course of a year is simply immense, reaching in the aggregate many millions of dollars. Most of this damage is preventable if people only knew how to dispose of these rodents, or were less willing to suffer all this loss and annoyance without making much of an effort to get clear of the pests. I do not like to have rats and mice and the like live with me in the same house; nor do I want them in the barn or corn-crib. I keep no cat or dog. My neighbors, however, are usually kind enough to furnish all the cats that a whole town might need. I have no objection to let a cat or two of theirs stay part of the time in my barn if they choose, but they must not come near the house. Cats, on the whole, afford no protection from rats, although they catch many mice. A good trap well baited and persistently kept set, is worth to me more than a whole regiment of cats. No matter how many of the latter there are about, rats will occasionally take up their abode on my premises, and they stay, too, notwithstanding all cats, until I dispose of them by means of a good trap. Rats come, but they always have to go, and that very soon, and usually they find a resting-place in the compost heap in the barn-yard—the burial place designated for all defunct domestic animals on the place.

A little treatise just published by the Rural Publishing Company, of New York (thirty-two pages, price twenty cents), tells how to rid buildings and farms of rats and other pests of like character. It is admirably written, truly interesting and practical besides. The author, Pickett, writes in a somewhat humoristic vein. I was glad to see him speak a good word for the identical trap which I have for years used with such deadly effect on rat-kind, and so much satisfaction to myself.

"There is the snapping trap, with a spring wire loop," he says. "It has various names, and is not to be sneezed at. It is a rattling good trap, looks like a back-action butter-paddle, and has a grip like a bay bull-dog. Whenever a rat monkeys with the bait the wire suddenly settles down on him and he is briefly snuffed out, as it were. It holds him down so firmly that there is neither kicking, squealing nor biting. He is obliged to lie there while the breath is silently but firmly squeezed out of him. For use in cellars, buildings, etc., it is one of the

best and most effective traps we know of. It sells at from ten to twenty-five cents, according to elegance of name."

I will only add that I have never seen the rat that, with a very little effort on my part, I could not induce to enter this trap. The book mentions the No. 1 Newhouse as another good trap, so much superior to the common rat-trap as to admit of no comparison. I am not acquainted with it.

In regard to poisoning rats, I am opposed to the teachings of the book. "The chief objection to this method (poisoning)," says Pickett, "is the balmy perfume that is certain to emanate from the decaying carcasses of a large number of rodents." He recommends to remedy this to a great extent by the use of disinfectants in and about the places where the aroma appears to be the most powerful. Nothing could induce me to poison rats in house or cellar. I do not want dead animals about me, and the stink would soon drive me out of the house. You may overpower the smell of rotten flesh by the stronger smell of carbolic acid or chloride of lime, still the air will remain impregnated with the terrible emanations and perhaps create sickness, notwithstanding all disinfectants. Otherwise, the nitrate of lead recommended by Pickett is very good, and may be used to good advantage for disinfecting cellars, cisterns, old wells, unused rooms, privies, etc. In one pint of boiling water dissolve half a drachm of nitrate of lead; now dissolve two drachms of common salt in a bucketful of cold water; then mix the two. Dip a good-sized cloth in it and hang in the room. It will purify the air in any room in short order.

What the book says about cats suits me much better: "A male cat that comes of a line of good meuse catchers, if emasculated when young, almost invariably makes a good barn cat. Such cats seem to delight in killing rats, mice, ground-squirrels and small birds just for the fun of the thing. Most cats hunt only when hungry, but these things hunt for pure sport. The gravest charge I have against them is their killing small birds just for sport. A professional tom cat is a nuisance of the first water. The chief delight of this beast is to climb upon some roof or fence in the dead hour of the night and yawn audibly. If he is joined by a comrade (and he generally is), they hump their spines, get on swell tails and wake the echoes and all the inhabitants in the locality with choice selections from *Impole Diable*. On such occasions as these an intense feeling of impiety arises in a person's bosom, and he yearns for the bell-muzzle gun of his forefathers—the gun that would shoot all over a whole county at one inning."

The book treats on almost everything pertaining to rats, mice, gophers, moles, prairie-dogs, rabbits, weasels, etc., and should be in every farmer's hand.

PEANUT CULTURE.—A bulletin issued by the Tennessee station, at Knoxville (F. Lawson Scribner, formerly of the department of agriculture, director), speaks of the peanut industry of that state. The crop of 1889 is estimated at 550,000 bushels, worth at least 90 cents per bushel. The crop of 1890 probably reached 850,000 bushels, worth \$590,000. The cost of the crop in Tennessee is about 40 cents per bushel. The average crop is from 40 to 60 bushels per acre, running as high as 80 bushels. Thus the peanuts give a clear profit of from 55 to 65 cents per bushel, which is equal to from \$22 to \$40 per acre.

In suitable locations as far north as New York City, I have found the culture of the peanut in gardens quite interesting, and with the new Spanish variety offered by various seedsmen, also quite a success. The crop requires a loose, warm, well-drained soil, which must also contain a sufficient amount of lime or marl, or lime must be added. The best soil in the state is said to be a light, gravelly clay. The brighter the clay and the pebbles, the better the nuts will sell, as clinging soil is apt to discolor the bulbs.

Peanut culture has had a remarkable effect upon the price of this class of land in the peanut regions of Tennessee. Formerly the best of this land was not considered worth more than \$5 or \$10 an acre. Since people have learned the value of this crop and the kind of soil which suits it, the good lands in this section adapted to the crop will readily bring \$40 or \$50 an acre. The land should be well prepared in the

spring and then checked off in rows from 24 to 32 inches apart. Two peas, carefully hulled out by hand, so as not to break the inner husk, are dropped at the intersection of the rows and covered about two inches deep. This is done the last of April or first of May. The surface must be kept well cultivated and loose, and the crop may be laid by about the first of August. After the first frost a plow is run under the vines to cut the roots, and the vines with the pods are then lifted out of the soil with a fork. Leave on the ground in the sun for half a day to wilt, then stack loosely around a pole seven feet high, using some sticks to keep them off the ground, and cap off with hay or straw. After four weeks the nuts may be picked off the vines. Keep the nuts dry and well aired all the time.

NOTES ON TWO INSECT ENEMIES OF THE MOUNTAIN ASH.

BY D. S. KELLOGG.

During the present term several prominent agriculturists of this state have lectured to the students in agriculture at the Ohio State University. I believe without exception, they spoke at some length and forcibly of the desirability of making the farmer's home comfortable and attractive. These qualities every homestead should and may possess in a very high degree.

At a recent meeting of a horticultural society, its president remarked that farms with roadways lined with shade-trees and with ornamental shrubs and trees about its buildings, were, in consequence, more salable, to say the least. A gentleman present at once remarked that "such farms are not for sale." His meaning was patent. The cultivation of such trees must certainly increase more and more as correct ideas concerning these matters prevail. If they are to flourish they must have intelligent care. Their needs and enemies both necessarily concern the successful cultivation. These notes are prepared in the interests of a beautiful, native ornamental tree as well as for those of the owner and lover of the same.

Dr. A. S. Packard, in the admirable treatise on "Forest Insects," recently issued by the Department of Agriculture, mentions only three species whose larvae bore the trunks of the mountain ash. These are: *Sapuda caudata*, the round-headed apple-tree borer; *Chrysobothris femorata*, and an unknown long-horn larva. The following should be added to the list: *Podosesia syringae* and an unidentified *Phycid*.

P. syringae is an *aegerian* described by Harris in 1840, and which closely resembles certain large wasps by its slender form and blue-black wings and body, with more or less reddish and orange on legs and body. It injures also the common lilac and the white ash. I have known several trees of the latter killed by it. About the middle of April I noticed that two mountain ashes in the University campus had many holes bored into the wood of their trunks by some insect; more than twenty openings were counted in each, occurring from the surface of the ground to the larger branches. On cutting away the wood I soon found the culprits within, changed to pupae within cocoons spun in the canals. May 2d, the first pupa shell was seen protruding from one of the cells, and during the following week nearly a score of the moths were taken resting or ovipositing on the trunks, usually in the forenoon. The life-history is approximately as follows:

The eggs are laid early in May, about scars or crevices in the bark, thus affording easy access to the wood by the young larvae. These bore at first in the superficial wood; as they approach maturity they penetrate deeper and extend their excavations many inches away from the place of entrance. They finally turn and reach the surface, leaving, however, a scale of outer bark concealing the place of final exit. A cocoon is spun remote from the surface, where pupation and the waiting for the final change takes place. When the time for this arrives, the pupa worms its way out until the anterior half of its body protrudes. The moth soon after appears, leaving the pupal skin in the orifice.

The remedies suggested by its habits are easily applied. When holes are discovered in the spring, plug them with wood, or probe the galleries with a wire, or inject hot water. Perhaps an alkaline or kerosene emulsion wash will prevent

oviposition and entrance of the young. Perhaps the better prevention is to keep the trees healthy, the bark smooth and to cover all accidental wounds. This insect is likely to prove a grave enemy of the mountain ash. The *Phycid* was found at the same time in the same tree. The larvae had all transformed April 15th, and the moths began to appear by the 20th. The slender, brown pupa is protected by a loose cocoon of white silk placed under the edges of loosened bark about old scars and excrescences. These irregularities or deformities were, doubtless, caused by the many larvae which had been at work in the superficial wood and bark. The moth is a pretty one, about three fourths of an inch across the wings, which are narrow and reddish, mingled with white in color.

The *aegerian* being a day-flying insect, emerges in the morning; the *Phycid*, flying at night, emerges in the afternoon, and may be found on the trunks at this time of day and destroyed. The larvae and pupa may be followed easily with the knife and extirpated. Prevention, however, is the better remedy. As it is probable that the young cannot penetrate the uninjured bark, they may be kept out by the usual means in case it has been broken by accident. Whether two brooded or not remains to be seen.

Ohio State University.

THE FIG IN CALIFORNIA AND ELSEWHERE.

This fruit must have, from present appearances, a grand future in California. Nothing, on coming here, astonished me more than the wonderful size, vigor and productiveness of the fig-trees in the warm, rich, broad interior valleys. The first large fig-tree I saw was on Rancho Chico, on the grand estate of Gen. Bidwell, at Chico, in the Sacramento valley, perhaps the grandest private estate, horticulturally considered, in the world. The tree was about thirty-five feet tall and forty-five feet through its head, and is said to have borne tons of fruit in a season, ripening three crops every year.

This tells, as well as whole pages of facts would, what the fig is in the Golden state. As I wrote of the pear, California seems perfectly adapted to the fig, and the fig to California. It is fully hardy here, and flourishes everywhere "like a green bay-tree." Everywhere, by the roadside, as a street tree, in the orchard, in the valleys, on the hills, with culture, with neglect on the driest soils, without water or with it, with no diseases or insects to trouble it or its fruit—all it asks is heat. This it must have in generous quantities to mature its fruit. The trees grow finely in the cool coast regions where there is not summer heat enough to ripen its fruit.

Fig culture here is still in its swaddling clothes, though it was cultivated here over a hundred years ago by the mission fathers. The above facts apply distinctly to the variety known as the Mission, or Black Mission, as introduced here by the early Spanish missionaries. And it applies to scores of other varieties; how many, none of us know as yet. This much I write from what I have seen and know. We will now open my friend, Prof. Wickson's new book, the "Fruits of California," and see what he says:

"The fig is perhaps the grandest fruit-tree of California. Its majestic size (I used to think the fig was a small bush) and its symmetry make it a crowning feature of the landscape, and its dense foliage renders the wide space embowered by it a harbor of refuge from midsummer heat. * * Measurements of large trees are abundant. At Knight's Ferry, in Stanislaus county, there is in the orchard of George A. Goodell a fig-tree, sixty feet in height, with branches of such length as to shade a circle seventy feet in diameter. The trunk, at the base, is eleven feet around."

Think of such a tree loaded three times each season so as to bend its branches to the ground with its rich fruit! But I must quote a little more:

"The largest grove in the neighborhood of Knight's Ferry, owned by G. H. Prouse, consists of fifteen massive black fig-trees, which, though set sixty feet apart, mingle their branches overhead and form a network through which, in summer, hardly a beam of light can pass. Beneath their branches at midday a heavy twilight prevails, and a person entering their shade from the sunlight without experiencing the

sensation of entering a darksome cave. Such groves are frequently seen in the older parts of the state."

Then follows measurements of the Gen. Bidwell tree, which I made a fairly good guess at as above. It is eleven feet in circumference a foot above the ground. "The wide-spreading branches have been trained toward the ground, and taking root there, banyan-like, they now form a wonderful enclosure over one hundred and fifty feet in diameter. The tree is loaded every year."

I make this last quotation as proof that in these letters I overestimate nothing; in fact, I fear to give California's growths and productions due justice for fear my eastern friends will say, "That is simply a California boom story." The immense amount of food—good, rich, nutritious food, rather than a fruit, as we usually speak of fruit—such trees will give in a season, is simply enormous, and there is much talk in the state at present of planting the Mission fig for swine and other stock food. Swine are very fond of them, fresh or dry, and there is no more relishing and fattening food for other stock than dried figs. As I have said and Wickson says, the tree grows here everywhere, but does best on an open, dry, rich soil. It grows readily from cuttings of all sizes, with little care, and fruits the second season, with irrigation the first.

One would think from these facts that nearly the whole state would now be in figs. It would have been if there was big money in the dried Mission figs. The Mission variety is black, and makes a black, dried fig. For such there is no market. There are a vast number of varieties of figs, some suited for drying, others not. The dried fig of commerce is called White. White drying varieties have of late years been introduced and are now being largely planted. Some difficulties are being met with; some will not bear, and but few have learned how to dry and pack them for market. Others are having grand success, beating the finest imported figs, and now actually receiving twenty to thirty cents a pound wholesale for their product, by the car-load. There is not the least doubt in my mind that California will soon supply the world's market with dried figs so fine as to drive all other competitors out. The domestic uses of the fig in the home are great. As a sweet pickle, properly put up, it is not only a fine condiment, but a rich food.

Figs should do fairly well everywhere east where the thermometer does not sink too low. But its natural home is in a hot climate with rainless or nearly rainless summers. It may do in Florida, though its summers are wet, also in the southern portions of the south Atlantic and Gulf states. I have seen it fruiting finely in Washington, the trees grown as bushes, but they had to be protected from cold in winter. It has been fruited considerably in southern Illinois and Ohio, by keeping the trees in bush form and bending them over and covering them with soil over winter. There is summer heat enough in all the middle and southern states to ripen one crop of fruit in a season. It is a very hardy tree to withstand everything but cold. Its fruit, like the tomato, is relished by few at first, but people generally become very fond of them if they keep trying.

D. B. WIER.

THE DAIRY.

Having written several letters on this subject, and also on the silo question, for your publication, I receive many letters from correspondents stating that it is no use to make good butter, or take the trouble and pains I describe, because their merchants will not pay any more for good butter than they will for poor, and in almost utter despair they appeal to me for information how to get a price for it that justly merits.

Let me say, once for all, good butter and poor butter and all grades do bring, every day, in our large city markets, exactly its true value. The farmer who thinks he knows his butter is better than his neighbor's, may be very much mistaken. If the good wife of his household makes the butter, his implicit confidence in her and his own perverted taste may have unfitted him for actually knowing what good butter is. Consequently, he may be finding fault with merchants and the markets when the trouble is at his own home, and the product of his dairy needs a reformation.

I have tried hard to explain to you why you should aim to do a winter dairy business instead of so largely in the summer. I have told you, plainly and truthfully, how it can be accomplished by help of the silo and ensilage—cheaper than it can be made in summer time, or hot-weather butter. It requires absolutely no effort at all in cold weather to make perfect butter, because the milk can be kept in a cool place from twenty-four to thirty-six hours, and all the cream from it will then rise before the milk gets sour. The cream-can that holds the different skimmings can also be kept in this same cold place until enough for a churning accumulates, and it is then easily ripened in one day by removing it into a warm room in a covered tin can. The next morning, when it is then cool again, the churning can be done easier than to-day, or ever done in hot weather. The butter comes nice and cold; and if a farmer is ever compelled to make ten-cent butter he should pray to have this affliction thrust upon him in the winter months.

To-day, in order to do good work, he must have ice or plenty of cold water; he must keep the milk-cans, to secure the cream, in this cold water; he must store the cream, when skimmed, in this same cool place. He can expose it to hot weather long enough to ripen ready for the churn; that is, to let it turn a little sour and commence to thicken, when he must then place it back into a cool place and let it cool down to at least 58 degrees the day before he can churn it into good butter. So you see every step of the way in hot weather we have trouble and hard work to do a good job in the dairy.

Common country or city merchants who buy butter and mix all kinds together for wholesale trade are the very chaps that "plzens" the great majority of the butter that is made in Ohio. The instant any

the greatest length of time. You can thus possibly save it. As I write to-day the hot-weather, twelve-cent butter is here on our market, and before you read this it will be only ten cents, or less. What encouragement is it for a farmer to attempt to live and pay off the mortgage with eight or ten cent butter? Do better work. Use better judgment in selling. Strive for perfection at every point, and then hope and persevere and you will be more apt to win the golden prize at last.

H. TALCOTT.

SWINGING WATER-GATE.

Mr. P. S. Wood, Kentucky, sends a sketch of a good swinging water-gate. To the posts, set solidly on each side of the ditch, is fastened a 2x6-inch scantling. Firmly fastened to this are two tracor-chains. Common six-inch fence planks are fastened to the chains by staples, and the whole appears as shown by the accompanying cut.

THE FARMER'S VACATION.

The season of the year is now at hand when the weary seek rest and recreation. Pleasure excursions are in order. The lawyers, doctors, bankers, preachers, merchants, clerks and even the toil-worn politicians, with their frail wives and delicate children, are off for the seaside or some other pleasure resort for a holiday. The change of scene is refreshing. The change of exercise quickens the circulation and gives a fresh glow to the complexion. New life is inspired and greater vigor is attained. The return to duty is like beginning anew. How pleasant that it should be thus.

But how is it with the weary farmer and his overworked wife? How is it with the farmer's boys and girls, who are taught to do the daily chores and assist with the general farm and household work? From early morn till late at night the well-

managed farm is a scene of constant activity. This activity, too, is of the sort that requires the continued exertion of muscle, and is not restricted to a working day of five to ten hours, but prolonged through twelve or fourteen, and frequently sixteen hours. Much of the labor is performed under the burning rays of a midsummer sun. How strange this class of toiling humanity should so seldom be

found enjoying the benefits of a vacation. How peculiar that the lawyer, who sits in his cool, cozy office, with feet on the table, should be more in need of rest than his rural brother. And the preacher who prepares one or two sermons a week is soon worn out, and his congregation finds it necessary to vote him a month's vacation and an extra hundred dollars, that he may go to the mountains or the seaside to regain his sorely taxed energies.

No vacation for the farmer. No change of scene. No cessation of toil. No relief from the dull routine of every-day life. Does he not need a vacation? Would a change of air and exercise not be a blessing to his wife? Would the boys and girls not enjoy an excursion by rail or boat? Could they not better perform their daily labor after such a season of refreshing rest? Would the old farm and its duties not be dearer to them could they but absent themselves for a few days, to enjoy the invigorating breezes from sea or mountain? Would the same amount of labor not be performed? Could the accounts not be made to show as fair a balance? Much would be learned by observation that would prove helpful at home. Food for reflection that would calm the weary brain for weeks to come.

Too few, however, of farmers, or farmers' wives and children, are thus enabled to renew their wasted energies. Too many are seemingly compelled to toil on day after day, month after month, and year after year, in the same well-worn channels of exhaustive labor without any change or recreation, until frail humanity, worn out by continuous exertion, lays down the burden and finds a resting-place beneath the sod. No vacation in which to recuperate the wasted tissues of the body, while improving the social and intellectual faculties. Is it strange that many farmers become sordid and morose?

Is it strange that so large a per cent of the insane women come from the rural districts? Is it strange that farmers' boys and girls should be so desirous of a home

in the city? Monotony of life, sameness of scene and isolation from companionship of society are trying things in the usual farm community.

It should not and need not be thus. The prudent farmer can certainly so arrange his affairs as to enable each member of the family a season of rest and recreation. A short excursion may be made by land or water to some point of interest. If not, the private conveyance may be called into service to transport the excursionists to some spot not previously familiar. A day's fishing at some neighboring pond, lake or river, or a family picnic in some shady grove will afford an opportunity for an abundance of pleasure, and at the same time bring new tone to the system. The change of exercise will prove beneficial to the body and the change of scene will be restful to the brain. Cheer and contentment will pervade the atmosphere, and life will be more worth the living. The farmer and his family are certainly entitled to a fair share of the pleasures of life.

JOHN L. SHAWVER,

HORSE NOTES.

I note a gentleman from Michigan answers Practical Farmer's article on breaking colts, and says he "never knew a colt broken single to fail to drive double." Many a horse will drive single and not double, and vice versa.

For driving single, I would enter a protest against the breast collar. I am fully satisfied a horse will not only draw more with collar and hames, but do it much easier. I noticed in driving my mare that she acted as though it cut and hurt her considerably, and she would double up drawing up hill; but when I changed to collar and hames, she acted like a new horse. The breast collar, if used at all, should be broad and padded. I have seen them trimmed with sheepskin, and they seemed to work nicely.

The check-rein I never bring up taut, as it seems such a relief to a horse to let down the check, and it champs and tries every way to stretch its neck. A horse while drawing or trotting wants his head, and it does seem too bad not to let him have it. It must be a constant worry to a horse, so do not check too high.

Shoes on a horse on the farm I consider unnecessary. I have not shod my horses for years. I have had fifteen different horses in as many years, and never could see that a horse with good, sound feet needed shoes even in winter, having driven on slippery roads in winter and on gravel roads in summer; but a good deal depends on shape and quality of horn.

GIVING THE COLT THE ADVANTAGE.

I wish to reply to a criticism in regard to my article on "Breaking Colts," in May 15th issue. It is claimed that my statement is incorrect in making 7 inches the advantage on a 3½-foot evener, when one horse was to pull 1,500 and the other 1,000, on a load of 2,500 pounds. I supposed it would be understood by what was given in connection with it that this case meant the distance between the outside clevises. With this understanding, I still claim the figures to be correct—one end 21 inches, the other 14. Twenty-one multiplied by 1,000 gives the same result as 14 by 1,500. Much obliged to you, Brother Patterson, for calling attention to this matter. The more it is considered, the better for all concerned.

P. HALL.

The indications are that the strawberry crown borer lays its eggs during March and April, in the plants near the surface of the ground.

Burning strawberry plants after fruit picking may destroy the crown borer.

Can You Eat

Heartily, with relish, and without distress afterward? If not, we recommend to you Hood's Sarsaparilla, which creates a good appetite and at the same time so invigorates the stomach and bowels that the food is properly digested and all its strength assimilated.

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N. B. When you ask for

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Don't be induced to buy any other. Insist upon Hood's Sarsaparilla—100 Doses One Dollar.

Our farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

MNEW WAY OF ROOTING CUTTINGS.—This spring the well-known seed firm of Peter Henderson & Co., New York City, advertised in all leading farm papers a new tomato under the designation of "No. 400." For this tomato the introducers want a good name, and they are willing to pay for it. So they offer a prize of \$250 to the person who suggests the name that finds most favor in the eyes of a special committee. Every person who has bought one or more papers of this seed has the privilege of competing for the prize, the condition being that each name thus suggested is written on the envelope which contained a seed package.

Here we have a most admirable advertising scheme, original, unique and perfectly legitimate, and unobjectionable at the same time. If I know anything about human nature, there are many people willing to invest twenty-five cents for the sake of taking their chances in a prize contest of this kind. Of course, I got a paper of the seed, less in the hope of obtaining the prize than for the sake of seeing what the new tomato looks like. The seed was planted in due time, but for some reason I got only two plants out of it. Then I sent for half a dozen plants, but they had received such terribly rough treatment on the way (in the mail) that they were all broken to pieces when they came into my hands. The tips of some of the plants only were in tolerably fair condition. These I cut off, wrapped a wad of cotton batting around the stem ends and placed this in the bottom of an ordinary glass tumbler, then soaking the batting thoroughly with tepid water. The tumbler with its contents was placed in the window of a warm room. No more attention was needed, the batting remaining moist long enough to start the roots on the cuttings. As the season was already well advanced at the time, the rooted cuttings were at once planted out in the open ground, nearly up to the tips, and they are now fine, thrifty-looking plants, and apparently as far advanced as any of the plants grown according to my usual way.

I got the first idea of this new way of rooting slips from a correspondence in an exchange, I think in "Success With Flowers," and I call attention to it on account of its simplicity and convenience. The materials—a tumbler and a wad of cotton batting—are always readily obtainable, and the batting, when once thoroughly soaked, remains moist for a long time, even in the dry atmosphere of a sitting-room; so that next to no attention is required for the cuttings after they are properly put in. The plan is suitable for any kind of plants that can be propagated from cuttings in the ordinary way.

THE WEED SLAYERS.—Gregory's finger weeder deserves another word of praise. The more I use it the more I think of it. One has to get intimately acquainted with some of these tools before one learns to appreciate them as they deserve. Of course, where but one wheel hoe is used, as in most smaller gardens, you will have to get along with a general-purpose tool, and none is better than the Planet Jr. We would get along first-rate with it in an average family garden. But for larger operations, especially in growing close-planted stuff, such as onions, carrots, lettuce, spinach, etc., we need tools designed especially for that purpose. I would hardly know, now, how to get along without Gregory's finger weeder. Of course, it requires careful work, a steady hand and otherwise intimate acquaintance with the tool. With these requisites, however, the tool becomes almost more than a mere machine. You can shave off the weeds next to the rows, and often finger them out of the row itself, or from closest proximity to an onion plant, to a nicety. But a careless hand might do much damage, cutting off or into many plants. For this reason I prefer to run the tool myself, whenever this is practicable. Otherwise, I let my twelve-year-old boy do the work. He enjoys it, and does it nearly as well as I could, although I do not expect him to run the knives quite so close to the plants as I do,

In handling this tool, and similar ones, we should aim to keep the parts clean and the knives bright and sharp. Moist soil is apt to adhere to the wheels, interfering with the easy manipulation of the tool. It seems to me that the makers (or any ordinary blacksmith) could easily adjust a knife to shave the dirt off the wheels as they revolve. The knives should be sharpened with a file occasionally, and thoroughly oiled every time after the tool is used and put away for the day. All these are great helps in lightening labor and in making it more pleasant.

For coarser work in the garden, as cultivating cabbages, early potatoes and the like, the new "Man Weight" cultivator, introduced this spring by J. A. Everitt & Co., seems to be a very excellent tool, embodying some correct principles. A brace attachment transfers the real work of propelling the machine from the arms (as in other hand wheel hoes) to the chest. A strap or string should be fastened to the brace to keep it in proper place. Everitt's illustrations of the machine, as advertised in their catalogue and elsewhere, represent the brace as resting against the stomach of the man operating the tool. It should be put higher up. The work of this tool makes a pretty fair substitute for horse work, when the latter is not available, or the patch to be gone over rather limited, so that it would hardly pay to get a horse into it. The cabbages, peas, early potatoes and vines in my kitchen garden near the house are kept in good cultivation by the free use of the "Man Weight." Of course, it requires some push and exertion when we wish to stir the ground deep and thoroughly, but what work can be done without effort and exertion? It may be a little harder work than hoeing with an ordinary hoe, but it goes ten times as fast.

The machine, as yet, has some defects; some parts are not strong enough and too easily broken, and the various attachments are not all that can be desired. But I am informed that the manufacturers are remedying these defects, and otherwise improving the tool and fixings. I am sure the machine fills a real want.

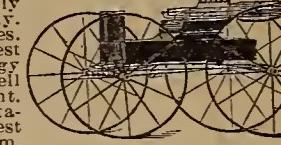
IS THE POTATO-BUG A THING OF THE PAST?—July is upon us, but potato-bugs have come only in very limited numbers, and to see even one we would have to hunt the garden over quite close. I have hardly seen a dozen specimens this season. Has the pest left us for good? I almost believe we have seen the last of it, for a time, at least. What may have reduced their numbers to such an extent I do not know. But whether unfavorable weather, disease or insect parasites are responsible for this result, it is enough to know that our old enemy has become quite scarce, while the insects that prey on them and their eggs seem to have become more numerous than ever. I find two and three lady-bugs on every potato hill, probably hunting for potato-bug eggs, which are one of their favorite delicacies.

As there does not seem to be enough eggs to go around, even for a taste, I am in hopes these little insects will be quite able to prevent the development of any offspring of the few potato-bugs that thus far have managed to escape. But what a fine thing it is that we can once more dispense with the use of Paris green and London purple!

Orchard and Small Fruits.
CONDUCTED BY SAMUEL B. GREEN.PROCURING NURSERY STOCK IN THE FALL
AND WINTERING IT.

In sections where the winters are very severe, it is not advisable to set out very young trees in the fall; but the practice of procuring them has become more and more popular, and experience has demonstrated its advantages. In the fall, nurserymen are not hurried with their work as in the spring; the season for digging and shipping is longer and the weather is cooler than in the spring, thus assuring a better condition of stock on its arrival at its destination; it is also very convenient to the customer to have the stock on hand to plant at any convenient time early in the spring. And to me it seems to be the most natural time to remove a plant or tree when it is naturally in a dormant state, and by heeling in properly they become in a measure adapted to their new locality.

All small fruit plants and shrubbery should be set out in the fall and nearly covered with good, moist earth to be re-

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Fire-Blight.—J. M. O'B., Reedsville, N. C., writes: "Please accept many thanks for the notice you were kind enough to take of the fly I sent you for investigation. As I was mistaken about it, I have this day sent you by mail, as per your suggestion, a sample of the work of the insect which is destroying our apple and quince trees. Soon after blooming the insect (or whatever it is) seems to perforate nearly every twig at various distances from the extremity—say two to fifteen inches, more or less. It very seldom interferes with twigs which have no blossoms or fruit. The apple and quince are the only trees they have attacked in my orchard. The top of the trees in full bearing, or those that have had full load of bloom, having suffered the attack of the destroyer and dried, look as if they would burn by the application of a torch. Unless some remedy can be found our apple and quince orchards will be completely destroyed. The mode or time of attack does not simulate that of a fungus. It is surely an insect."

REPLY:—The specimens of injured wood received I examined carefully and could find nothing to show the work of any insect; but in order to be sure, I submitted specimens to the eminent entomologist and botanist, Dr. Otto Sager, and he endorses my view that your trees are attacked with what is called fire-blight. This fungus disease is very common on the quince in all the eastern states and on the apple in the West. There is no practical remedy known, but it may be prevented to some extent by persistently cutting off and burning the diseased portions as soon as it shows its work. This trouble rarely lasts in any locality many continuous years, but there will be a series of years when the loss from this cause will be very slight, or none at all, and then it will again show itself. Spraying the trees early, and at intervals of a few weeks during the season, with fungicides has been tried, but has not proven very satisfactory.

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Our Farm.**PUBLIC ROADS.**

Major William M. King, of the United States Department of Agriculture, spoke on "Public Roads," a matter in which the farmers and other tax-payers of the county feel a deep interest. "Science should be combined with practice," he said. He confined his remarks to the advantages of good roads, and how to make and keep them. He said: "Public roads are of greater moment than any partisan political subject can be. [Applause.] Roads were never in a more impassable condition than now, and something should be done to prevent the repetition of such a condition of things in the future. Farmers who are not near the city are not afforded facilities for getting to market. It costs the farmer more to get his produce to the railroad station than it does to pay freight on the cars. There is something radically wrong, and it should be remedied at once. It now requires four horses to do what two could do if there were good highways. It would be more profitable, and certainly less annoying, if the people would build their own roads. Good roads pay. With bad roads go bad fences and general untidiness, but with good roads it is just the opposite. In this part of the country, where hard material is plentiful, good macadamized roads should not cost more than \$1,200 per mile to make. A good road is one of the best paying investments for the farmer. It would be a good thing for neighbors to combine and pay a competent man to keep the roads in order."

MONEY THAT IS WASTED.

"Fully one half the money expended in this country for road making is wasted. There are three classes to build roads: First, the county; second, the county and townships jointly; and third, townships alone. There should be a general manager employed, and the township commissioners should work under his supervision. The county surveyor should also be a civil engineer, who should be paid liberally, and he should attend to the general supervision of the roads in his county. Roads should be made forty feet wide between the fences, and twenty-four feet between the ditches. They should be laid out, and then they can be macadamized and graveled when practicable. In laying out a road, as much attention must be given to grade as to distance. A much better road can be gotten from broken stone than gravel. It requires twice as much power to haul a load over a gravel road as over one of broken stone. No stones should be used which will not go through a two-inch ring; hard stone should go through a one and a half inch ring."

"The desirability of a road depends upon its surface draining. Underdrainage is also essential. Without thorough drainage a good road is impossible. Good drainage is a vital matter in the construction of roads. There should be competent road supervision. Smooth, hard roads bring the farmer nearer to mill, to market and to meeting; they are essential to the best development of the people; they are a financial blessing, and tend to promote the educational advantages of the community. Purchasers of farms would seek such pleasing neighborhoods, and lands would sell quicker and at higher prices. Education and refinement, in connection with the increase in the attractions of home, would give a higher position to life in the country, and a greater number of our best young men and young women would prefer a refined agricultural home to the turmoil and anxiety incident to town or city life. Good roads are needed more than costly county buildings."

POLITICS OF ROADS.

"It pays to be liberal in the expenditure of money for public roads. To secure good highways we must have good laws, and farmers should go to the nominating conventions and see that practicable, wide-awake men are sent to the state legislature. [Applause.] Resolve, now, to turn over a new leaf. See that men are sent to the state and national councils who are practical business men, who will not legislate against us, but for us." [Applause.]—*Baltimore Sun.*

WINSTED, CONN., March 9, 1891.
I have received the Peerless Atlas and find it a very fine work. It supplies the wants of a ten-dollar edition. MISS E. M. KILBOURN.

EXTRACTS FROM CORRESPONDENCE.

FROM WYOMING.—Laramie City, the county-seat of Albany county, has a population of nearly 7,000. It has rolling-mills, machine-shops, soap-works, flouring-mills, glass-factory, soda-works, the state university, the state penitentiary and the state fish-hatchery. We have an abundance of coal and wood. We have plenty of good building stone. There are seven different church denominations in the city, two public schools and two private schools. Stock-growing is the greatest industry in the state. There is a great deal of mining carried on here. There are gold and silver mines within thirty-five miles of Laramie City. Small grain does well here; also small fruit and garden produce; but corn will not grow in this part of the state.

Laramie City, Wyoming. A. G. R.

FROM KANSAS.—Many of your readers would be glad to know of a healthy climate, fertile soil, cheap and easily tilled. Allow me to mention Barber county, Kansas. The county-seat, Medicine Lodge, has a \$30,000 court-house, a \$20,000 school-house, a \$25,000 water-works and a \$100,000 sugar-mill. Eight years ago this land belonged to Uncle Sam. The farmers came and tore open the sod, and planted seeds as an experiment. It is no longer an experiment. Wheat is a sure crop, yielding twenty to thirty bushels per acre. Millet and sorghum are certain crops, and pay well. All fruits do well. Corn does well with a good rain in July. Without July rains about half a crop can be expected. There are thousands of acres of good range grass free to the herder, in the western part of the county. There is plenty of good water, but no timber except elm and cottonwood, growing along the streams.

Medicine Lodge, Kan. D. J. A.

FROM NEBRASKA.—I am surprised that there are not more people looking after this cheap and productive land. Our markets are handy, as we have a railroad running from Grand Island to Broken Bow and on to the Black Hills, and we have the Union Pacific. Both roads have nice towns every seven miles, on an average. Kearney is the county-seat. It has a cannery, a cotton-factory and an oatmeal-mill. Streets are lighted by electricity, and electric street-cars are also being run. We have cool nights and plenty of wind in daytime. The climate is all a person can wish for good health. There are a few apples, cherries, strawberries, blackberries and raspberries grown here, but they have not been tried long enough to make any tests of their production. The soil is a dark loam and very rich and deep, and cannot be surpassed for garden vegetables anywhere.

H. A. B.

Sweetwater, Neb.

FROM ARIZONA.—If an eastern farmer or any one else would like to find a place free from all malarial diseases, or free from the snowstorms of winter, this is the land. All the truck farming that is now carried on is done by Chinamen. But there is just as good a show for a white man as there is for a Chinaman. In the first place, you can ship everything you raise. We have two good railroads. Wheat sells for \$1 a bushel; alfalfa or lucerne sells at \$4 per ton; baled alfalfa at \$1 per bale. A great amount of barley is grown here, which also finds a ready sale. Tempe is beautifully situated in the heart of the Salt River valley. It has perfect natural drainage. It is the center of a productive valley of four hundred thousand acres. The Territorial Normal School is located here, which furnishes educational advantages superior to any other city in the territory. We have good schools here which are in the hands of most competent instructors. We have also some good churches here of different denominations.

Tempe, Arizona. T. Y. M.

FROM OHIO.—Attention is called to a few facts concerning one of the best developed counties in the "Buckeye State." Montgomery county is situated in the south-western part of the state, embracing a large portion of the fertile Miami River valley, being well adapted to corn, wheat, oats, clover, grasses, vegetables, melons, berries and fruits, not to mention the nine million pounds of tobacco annually raised. The growing crops look well. Wheat is remarkably good. This region has the blessings of a mild and healthful climate, having a mean annual temperature of 53° Fahrenheit, and an average yearly rainfall of forty-four inches. This county has a large, thrifty population of intelligent, free, virtuous and happy people. Dayton is a good example of their push, energy and development; it is a genuine product of industry. The streets are wide and well shaded. The numerous magnificent public and private structures make it attractive. It has eight lines of railroads. Three miles from this city of 69,000 inhabitants is situated the National Soldiers' Home, a very beautiful and attractive place.

S. S. C.

Trotwood, Ohio.

FROM MISSOURI.—The northern portion of Shannon county is very broken; the southern portion is not so much so. We have no prairie lands, but have what are called valley bench

lands and uplands that produce well. They are adapted to wheat, corn, oats, grasses, etc. For fruit growing, southern Missouri takes the cake. We have vast forests of excellent pine, much of which is being cut into lumber. Thousands upon thousands of feet of lumber are daily shipped to the far West. Lumbermen should remember that Current river and Jack's Fork are streams of water running almost through the center of the county. The latter empties itself into the former near the center of the county. If you want water-power, here it is. This county abounds in excellent springs, except in part of the southern portion. We have good range for stock. We feed our stock about five or six months of the year. The oaks often produce excellent crops of acorns that fatten our pork or put them in good condition. Copper and other minerals have been found in this county. We have no swamp lands, therefore we have health. Of course, people sicken and die, but we are up to the standard of health with any county in the state. Now and then we haveague, but nothing like lowlands.

J. A. B. Bartlett, Mo.

FROM SOUTH DAKOTA.—Charles Mix county is one of the most favorably located in the state. Although not generally settled until the summer of 1883, it has won an enviable reputation as one of the best counties of the state. As to church and educational privileges, I do not think there is a state of the same age that can make a better showing. Although we are placed at a disadvantage by not having a railroad in the county, Charles Mix county, according to the census of 1885, had a population of 4,022. The climate is healthy; not much sickness prevails. The people of this county are of a wide-awake, industrious class. This is a good place for young people. The constitutional amendment prohibiting the manufacture and sale of intoxicating liquors was submitted to the people and was adopted, and so we have no saloons in this county. Of the more than sixty indictments found by the United States grand jury at Sioux Falls, the present term of United States court, nearly all were liquor cases growing out of the prohibition law. It is a fact that some who came here have been unfortunate; or, rather, did not understand the peculiarities of the country, and bought much expensive farm machinery, which finally resulted in their having to pay three per cent a month bank interest. The loan companies are getting considerable land into their hands. Some of these farms may be bought for about the price of the improvements.

C. F. O.

Edgerton, S. Dak.

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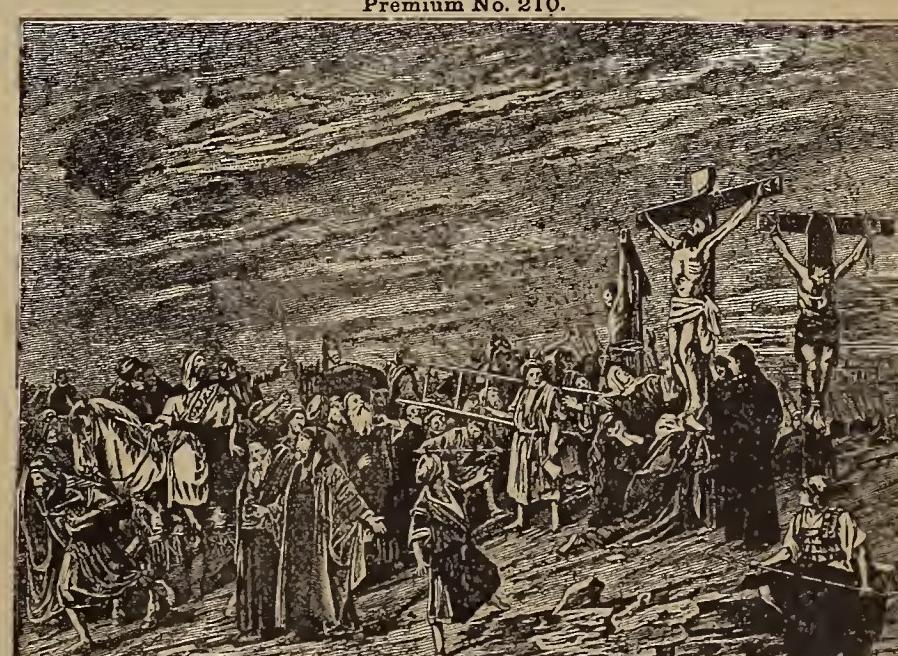
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No, she does not live on dew,
And her brow's not lily white,
And her hair is not the hue
Of the sun's eye-dimming light.

No, her teeth are not like pearl,
And her mouth is not a rose;
She is just the kind of girl
Nature generally grows.

SOMEBODY'S MOTHER.

The woman was old and ragged and gray,
And bent with the chill of the winter's day;

The street was wet with a recent snow,
And the woman's feet were aged and slow.

She stood at the crossing, and waited long,
Alone, uncared for, amid the throng

Of human beings who passed her by,
Nor heeded the glance of her anxious eye.

Down the street, with laughter and shout,
Glad in the freedom of "school let out,"

Came the boys like a flock of sheep,
Hailing the snow piled white and deep.

Past the woman so old and gray
Hastened the children on their way.

Nor offered a helping hand to her,
So meek, so timid, afraid to stir,

Lest the carriage wheels or the horse's feet
Should crowd her down in the slippery street.

At last came one of the merry troupe—
The gayest laddie of all the group.

He paused beside her, and whispered low,
"I'll help you across, if you wish to go."

Her aged hand on his strong, young arm
She placed; and so, without hurt or harm,

He guided the trembling feet along,
Proud that his own were firm and strong.

Then back again to his friends he went,
His young heart happy and well content.

"She's somebody's mother, hoy, you know,
For all she's aged and poor and slow;

And I hope some fellow will lend a hand
To help my mother, you understand,

If ever she's poor and old and gray,
When her own dear boy is far away."

And "somebody's mother" bowed low her head
In her home that night, and the prayer she said
Was, "God, be kind to the noble hoy,
Who is somebody's son and pride and joy!"

Next Door to the Church.

Twas not the rectory; that was on the other side. It was a long, low-studded, old-fashioned house, with wide, rambling piazzas and a lawn which ran up to the very church windows, and preserved its identity as a lawn, and distinct from a church-yard by the intervention of a low iron fence. A gate in the iron fence and a box-bordered walk leading to a little side door in the north transept, rendered the church easy of access, and left not the shadow of an excuse for any member of the Birch family to stay away from service.

Not that the Birch family ever desired to stay away from service. Quite the contrary. Mr. Birch, being senior warden, took up the collection, and could not be spared. Mrs. Birch was godmother to all the babies who came into the world not sufficiently well supplied with that necessary article, and it was incumbent upon her to be a properly shining example. John went to church because his father and mother and Katherine did, and he did not like to be left at home alone; at least, that is what John might have said if he had been asked, but I doubt if it had ever entered his head that he could stay at home.

And Katherine? Katherine had loved to go to church all through her happy childhood and girlhood; and when she came home from college this bright summer—a "sweet girl graduate," as John mockingly called her—she loved it more than ever. Moreover, Katherine loved to go into the great, dusky church in the sweet summer afternoons, when there was no congregation to disturb the solemnity of the place, and when she could sit quiet in the corner of a pew and think her own thoughts and plan her own future. A glorious future it was to be, full of noble self-sacrifice and of toil for suffering humanity. And the sunshine falling upon the tiled floor in wavering patches of purple and yellow seemed to her to symbolize her dreams. The purple meant the struggles she should have to make; the gold, the joy which would result from the brave conquering of self. It was not very profitable, and her color symbolism was certainly all wrong—but the afternoons in the old church were helpful, happy times to her.

Sometimes John would come too. But John was a useful rather than an ornamental member of society, and he knew that his proper place was behind the organ, where he did not show, but where he rendered invaluable aid to Katherine, who, perched upon the high organ seat in front, voiced her ideals and aspirations in the music she wrung from the heart of the great organ. These afternoons were even better than the quiet ones.

The rector of St. Mark's was young and new to the parish. He had heard much of Katherine before her return from college; too much, in fact, to make him look forward with

pleasure to the prospect of such a parishoner. "Katherine will bring new intellectual life into her circle of young friends," said her mother. "Katherine will know the reasons for these new-fangled notions of yours," said her father. "My, but Kittie knows when a sermon is bad," said John. And outside the family it was the same, until the minister groaned in spirit.

"A paragon in a parish is a positive pest," said he to himself, unconsciously alliterative in his scorn. "I, at least, shall not bow down to this intellectual autocrat."

The day of her arrival came. It was Saturday. Mr. Carson was a frequent guest at the hospitable mansion next door, and after his late dinner he dropped in to pay his respects. "Better get it over with," thought he. He was not a man who fled from disagreeable duties.

As he stepped upon the wide front veranda, a figure rose from a hammock at the end and came forward—a little figure, slender and graceful. The setting sun behind fell upon the golden hair, making a shining halo about it. The rosy gown repeated the colors of the evening sky. It seemed to the young man that the heart of the sunset had embodied itself and was coming to meet him. And then the brilliancy of the sky faded, and there was only a maiden with golden hair and a rosy gown standing before him, holding out her hand and saying:

"This is Mr. Carson, is it not? Mamma told me to expect you. She will be out very soon."

Then bustling, housewifely Mrs. Birch appeared in the front door with: "Oh Katherine, my dear, are you alone? Why, here is Mr. Carson. And Mr. Carson, this is my daughter. How glad I am to have you know one another, after all you have heard about each other. Now, do sit down and talk and be friends."

Katherine looked at the minister again, and there was a twinkle in her eye and a curious little smile about the corners of her mouth. Mr. Carson felt more uncomfortable than suited his priestly composure. What had Mrs. Birch been saying about him? Could it be that he had been held up before this charming maiden as a paragon, until she regarded him as he had expected five minutes before to regard her?

"But, indeed, Mrs. Birch, you do me too great honor," he said. "I trust that you have not given Miss Birch a wrong impression."

And then he wanted to annihilate himself for having brought down the flood of eulogy which kind and outspoken Mrs. Birch proceeded to pour upon his devoted head. And Katherine sat demurely by and tried to look solemn and awed, as was proper in the presence of one whom her mother so revered, but a most absurd little smile would play about the corners of her mouth, making the dimples come and go in a fascinating way. Mr. Carson knew she was laughing at him, and he did not like it, but he liked to watch the dimples.

Katherine had not expected to find Mr. Carson a paragon. She knew her mother's fondness for clergymen of any sort, and especially for her own particular rector. She knew equally well her mother's habit of seeing and talking about the best in everyone, and she had come home prepared to meet a very ordinary young man. Katherine had a habit, not inherited from her mother, of regarding most youthful members of the stronger sex as "very ordinary young men indeed." This was not because they did not admire her, but probably because they did. Katherine's ideals, you know, were very high, and then she was inexperienced.

After that the happy days flew by on swift wings; the beautiful, golden summer time was fast growing into autumn, and the house next door to the church had had more than its share of good times. But it happened that often Katherine would be missed from the gayest of the parties, and would be discovered in the hammock, with Mr. Carson on a chair by her side, engaged in earnest discourse.

"Oh, they're talking plans," said John. "She is going to teach poor children in the slums of New York, and he's going to be a 'celebrate,' whatever that is. I heard them this morning. He's going to lead a life of stern devotion to duty, he said; and Kittie looked soulful, and said so was she. Truly, if Kittie weren't so jolly, she'd be a stick; and anyway, she ain't as nice as she used to be. She's prettier though, only Mr. Carson never notices whether a girl's pretty or not."

September came, and with it the time for John's return to school. The day before his departure he was lazily swinging in a hammock on the porch, when a voice called to him:

"John, dear John, just one more favor before you go."

John knew well enough what was the favor she asked, and after all, this was the last time, and she was a jolly sister anyway; so he came, not ungraciously, down upon the lawn to Katherine, and together they went into the church.

Ten minutes after the tower door opened softly and Mr. Carson came in. He had brought a new *Te Deum* for Katherine to try; but Katherine was absorbed in her music, and had not heard the opening door and the entering footsteps, and did not look around. The minister stood still. The church was cool and dim after the sunshine outside. The wavering patches of purple and gold lay in long lines across the floor. Katherine had not told him her little conceit about the purple and gold. She knew that it was silly, and he only thought vaguely that the colors were

beautiful, and that somehow they reminded him of Katherine; and then he looked at her. In the shadow of the great organ she sat, grave and still, with upturned face.

"St. Cecilia," murmured the minister, and he, too, stood very still for a minute. Then he gave himself a little shake and came forward. How he was tempted to let his fancy wander, here in the old church. He knew his duty, the path he had laid out for himself to walk in, and it was a path of self-renunciation; but how his determinations had been weakening all through the bright summer time, and how he had permitted this paragon ("for this is a paragon," said the minister to himself, "though not the kind I had expected to see") to set his heart a-flutter.

"I must not," he said. And he walked calmly up the long aisle—up to her very side. But Katherine turned and looked at him, and smiled a grave greeting, her hands still upon the keys and a soft minor chord filling the air.

"Katherine, my little Katherine!" said the minister, and his strong hand imprisoned the little one on the white keys. The chord became a sudden jumble, and then stopped altogether.

"And when he called her little Katherine, and she didn't say anything, I stopped pumping," said John, afterward, "for usually Katherine hates to be called little."

The sun streamed in through the west window; the soft light fell upon Katherine's hair.

"The gold is the color of your hair, and the other is the color of your eyes; that is why I love it, dear heart," said the minister.

"And the purple doesn't mean sorrow," said Katherine, very softly. "It means glory."—*Harper's Weekly.*

EARLY MENTAL CULTURE A MISTAKE.

The history of the most distinguished men leads to the conclusion that early mental culture is not necessary to produce the highest powers of mind. There is scarcely an instance of a great man, one who has accomplished great results and has obtained the gratitude of mankind, who in early life received an education in reference to the wonderful labors which he afterward performed.

"I was brought up among the highlands of Connecticut," said Chancellor Kent, "and was never kept on the high-pressure plan of instruction. I was roaming over the fields and fishing and sailing and swimming and riding and playing ball, so as to be but superficially learned when I entered college. I was not in college half the time. I was at home, at leisure, or at gentle work, and much on horseback, but never in the least dissipated. When I went to study law I had my own leisure and great exercise and relaxation in enchanting rides and home visits, until I got to the bar. I lived plain, drank nothing but water, ate heartily of all plain, wholesome food that came in my way, was delighted with rural scenery, and active and healthy as I could be. It was not until I was twenty-four that I found I was very superficially taught, and then voluntarily betook myself to books. The ardor and rapidity with which I pursued my law and literary course were great and delightful, and my health and spirits were sound and uniform, and neither has faltered down to this day."

Herbert Spencer says: "The ordinary treatment of children is in various ways seriously prejudicial. It errs in deficient feeding, in deficient clothing, in deficient exercise (among girls, at least), and in excessive mental application."

Considering the regime as a whole, its tendency is too exacting; it asks too much and gives too little. In the extent to which it taxes the vital energies, it makes the juvenile life much more like the adult life than it should be."

"The educational abomination of desolation of the present day," says Prof. Huxley, "is the stimulation of young people to work at high pressure by incessant competitive examinations. Some wise man (who probably was not an early riser) has said of early risers in general that they are concealed all the forenoon and stupid all the afternoon. The vigor and freshness which should have been stored up for the hard struggle of practical life have been washed out of them by precocious mental debauchery, by book-gluttony and lesson binging. Their faculties are worn out by the strain put upon their callow brains, and they are demoralized by worthless, childish triumphs before the real work of life begins."

AN ACTRESS' FALSE NECK.

A well-known actress of advanced years, who recently appeared in Philadelphia in a youthful character, used a very ingenious contrivance to assist in making herself presentable in a low-cut dress. A strong leather belt is clasped about the waist of the person wearing the machine, and this forms the basis for strips of papier-mâché which go to make a bust, neck and back of generous proportions. The outside covering of this counterfeit consists of the heaviest kind of flesh-colored silk lined with the softest kind of kid leather. This combination makes a remarkably lifelike skin.

However, the height of the deceptive art is reached in the ingenious arrangement which makes the breastrise and fall to correspond to

the breathing and the emotions of the wearer. Directly beneath the outside cover of silk is a thin air-cushion stretched to the proper shape by means of wire. Broad but very flexible springs rest against the wearer's bosom, and are connected to the air-cushion. The slightest heaving of the bosom is communicated by these springs to the air-cushion, and as a result the movement is natural enough to deceive even the most expert. The silk covering is made gradually thinner near the top, and ends pretty well up on the neck, which it closely clasps. A necklace of diamonds covers the arrangement at this point and makes the deception complete.

SLEEPING FOR BEAUTY.

Sleep is, under right conditions, a wonderful tonic to the human system. Few women realize its value, and yet it is said that Patti and Lucca and all the great singers and actresses and famous beauties, who, like Madame Recamier, were wondrously beautiful at an age when ordinary women retire from the festive scenes of life, have owed their well-preserved beauty to sleep. A beautiful woman who at fifty has the brilliancy of youth in her eyes and skin, and the animation of girlhood in her form, declares that she has made it a rule all her life to retire whenever possible at nine o'clock. And American women, of all classes, need the rest and refreshment which sleep can give to overwrought nerves and overworked systems.

If sleep is not easily induced, light physical exercise should be taken nightly before retiring, until the blood is directed into proper channels. Then upon seeking the couch the eyelids close as naturally as those of a healthy child. The knowledge which women need above all else is a knowledge of self. To study intelligently nature's laws is to enter the widest realm that human feet can tread; to enter, in a word, the kingdom of righteousness, where all is beautiful and fair, because all is good that is in confirmation with the will of the highest.—*Light.*

BOYS ON THE FARM.

The decadence of farming of late years is largely due to the undeniable fact that city life has offered greater attractions as well as greater profits to the young. While it is true that farming does not now require so severe and unremitting toil as formerly, can it be said that young people on the farm have been encouraged to find their pleasures and relaxation at home? This is the only way to make farm life attractive to the average young man. If on each holiday he goes to the city, it will naturally seem to him that city life is all a holiday, while life on the farm is one of unceasing drudgery. It often happens that city boys, kept at work in stores and only allowed to go into the country for vacation, see only the holiday side of farm life, and acquire a love for it that those brought up on the farm too often do not share. Why do farmers take a hint from these facts and make as much holiday as possible for their sons at home? It is time that the old rule, which made the boy hoe his row and run for water while the men rested, was superseded by a practice which would give boys the easiest tasks, and the little investments that gave largest profits, as the best means to interest them in farming and make this the occupation of their lives.

CURE FOR ROUND SHOULDERS.

Round shoulders are almost unavoidably accompanied by weak lungs, but may be cured by the simple and easily-performed exercise of raising one's self upon the toes, leisurely, in a perpendicular position, several times daily. Take a perfectly upright position, with the heels together and the toes at an angle of forty-five degrees. Drop the arms lifeless at the sides, animating and raising the chest to its full capacity muscularly, the chin well drawn in. Slowly rise up on the balls of the feet to the greatest possible height, thereby exercising all the muscles of the legs and body; come again into a standing position without swaying the body backward out of the perfect line. Repeat the exercise, first on one foot then on the other.

PRESERVING THE HEALTH.

1. Rise early and never sit up late.
2. Wash the whole body every morning by means of a large sponge, and rub it dry with a rough towel.
3. Drink water.
4. Avoid spirits and fermented liquors of every kind.
5. Keep the head cool, and sleep in an airy apartment.
6. Eat no more than enough, and let the food be plain.
7. Let your supper be light.—*Hall's Journal of Health.*

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AN EMBARRASSING IGNORANCE.

One of the most necessary appurtenances of the dinner-table is a host who knows how to carve. Is there any greater annoyance than a host who struggles, crimson with effort, to disjoint poultry, tearing the frame to pieces and spreading bits and fragments all about on the cover? It should be a part of every boy's education to learn to carve. We are so busy training girls for their future positions, which means not only self-support, or a fitting for it, but also a training in the social graces, and the necessary knowledge of household economy, that we never think of doing more for our boys socially than sending them to dancing school and giving them the natural training in the home; we leave them to acquire any further knowledge by attrition or absorption.

A recent writer to a prominent journal says that he believes the lack of knowledge of carving has been the cause of more conjugal disputes than any other one subject. The social training of the wife making her sensitive to the comfort of her guests, and sensitive to the fitness of things in the family life, the lack of this very necessary knowledge is a constant source of irritation. There comes to mind a noble gentleman, of Welsh descent, who never had a large income, but who trained all his sons and daughters to carve, and when they went into homes of their own they could serve a dinner, with the aid of one servant, with the ease and quiet of a house with butler and aids. Who of us has not sat at table, at some time, where the struggle of the host with the carving suggested the idea that presently he would ask if he might remove his coat? It is far better when the host has not this knowledge, to have the carving done outside, in butler's pantry or kitchen. It saves embarrassment, and when once the servant is trained to serving from a sideboard, the ease and comfort that follow are ample reward for the effort expended in teaching her.

Every wife who has been embarrassed by her husband's awkwardness or ignorance in this important function should have a strong incentive to have her boys trained to carve "fish, flesh or fowl" with ease of body and mind.

HOW TO READ THE TONGUE.

The perfectly healthy tongue is clean, moist, lies loosely in the mouth, is round at the edge and has no prominent papillæ. The tongue may be furred from local causes, or from sympathy with the stomach, intestines or liver. The dry tongue occurs most frequently in fever, and indicates a nervous prostration or depression. A white tongue is diagnostic simply of the feverish condition, with perhaps a sour stomach. When it is moist and yellowish-brown it shows disordered digestion. Dry and brown indicates a low state of the system, possibly typhoid. When the tongue is dry and red and smooth, look out for inflammation, gastric or intestinal. When the papillæ on the end of the tongue are raised and very red, we call it a strawberry tongue, and that means scarlet fever. Sharp-pointed, red tongue will hint of brain irritation or inflammation, and a yellow coating indicates liver derangement. When so much can be gained from an examination of the tongue, how important it is that the youngest child should be taught to put it out so that it can be visible to the uttermost point in the throat.—Dr. Julia Homes Smith, in *New York Ledger*.

THE GREAT BURLINGTON ROUTE.

The traveler, be he business man or pleasure tourist, finds nowhere on the face of this green earth railway trains that stand the test of comparison with those running daily between Chicago and Denver on the Great Burlington Route. Luxuriously equipped with every modern device to insure safety and comfort, and officered by courteous and attentive train officials, these trains, consisting of Pullman sleepers, parlor, dining and reclining-chair cars of the most elegant design, speed over the plains of Illinois, Iowa, Nebraska, northwestern Kansas and Colorado, through gardens of marvelous agricultural productivity, charmingly interspersed with thriving cities, towns and villages, where the wheels of industry almost realize the philosopher's dream of perpetual motion. There is, probably, no section of the country where the natural elements contribute so liberally to intelligent agricultural activity as the sections lying contiguous to this mighty "iron artery" of the West—the Great Burlington Route. It is the modern farmer's El Dorado, sure enough, and has been so declared by the United States Department of Agriculture, outranking all other sections of the country in the conditions necessary to the successful raising of cereal crops of all kinds, stock-raising, etc.

Along the line of the Burlington & Missouri River Railroad in north-western and south-western Nebraska, there are nearly four million acres of choice land subject to entry, which are admirably adapted to the requirements of the small stock farmer and dairyman. If any of our readers contemplate changing their conditions of life, and wish to do so for the better, without any doubt, whether they be farmers, manufacturers or business men, we unhesitatingly advise them to send to P. S. EUSTIS, General Passenger Agent C. B. & Q. R. R., Chicago, Ill., for descriptive pamphlets and other matter giving location and full particulars concerning these lands.

WHAT A HORSE WOULD SAY IF HE COULD SPEAK.

Don't hitch me to an iron post or railing when the mercury is below freezing. I need the skin on my tongue.

Don't leave me hitched in my stall at night with a big cob right where I must lie down. I am tied and can't select a smooth place.

Don't compel me to eat more salt than I want by mixing it with my oats. I know better than any other animal how much I need.

Don't think because I go free under the whip I don't get tired. You would move up if under the whip.

Don't think because I am a horse that iron weeds and briars won't hurt my hay.

Don't whip me when I get frightened along the road, or I will expect it next time and maybe make trouble.

Don't trot me up hill, for I have to carry you and the buggy and myself too. Try it yourself some time. Run up hill with a big load.

Don't keep my stable very dark, for when I go out into the light my eyes are injured, especially if snow be on the ground.

Don't say whoa unless you mean it. Teach me to stop at the word. It may check me if the lines break, and save a runaway and smash-up.

Don't make me drink ice-cold water, nor put a frosty bit in my mouth. Warm the bit by holding it a half minute against my body.

Don't forget to file my teeth when they get jagged and I cannot chew my food. When I get lean, it is a sign my teeth want filing.

Don't ask me to "back" with blinds on. I am afraid to.

Don't run me down a steep hill, for if anything should give away, I might break your neck.

Don't put on my blind bridle so that it irritates my eye, or so leave my forelock that it will be in my eyes.

Don't be so careless of my harness as to find a great sore on me before you attend to it.

Don't lend me to some blockhead that has less sense than I have.

Don't forget the old book that is a friend of all the oppressed, that says: "A merciful man is merciful to his beast."—*Farm Journal*.

REMEDY FOR WRINKLES.

It is common to speak as if any care of the skin beyond personal cleanliness was foolish and a sinful waste of time. This is but a remnant of the old idea which rigid Puritans held in common with Catholic ascetics, that it was inducive to a saintly frame of mind to make the dress as hideous as possible, and show one's contempt for the natural beauty which God has lavished all over the face of the earth. A soft, beautiful complexion is certainly an attraction which every woman should desire, and any simple means which does not occupy time needed for more important matters should be tried to attain such an end. There are many complexions which chafe readily and tan in the spring winds. A simple preparation of sweet cream rubbed into the skin after washing it thoroughly is a remedy for this trouble. This should be applied at light, just before retiring, and the next morning the face should be washed thoroughly, first in lukewarm water and afterward in cold, to give tone to the muscles. Some ladies who do not find glycerine irritating to the skin, use in the same way a small portion of it diluted with half its bulk of rose-water. This preparation is rubbed in the face and hands, and gloves are worn at night. A little ammonia in the water is a help toward keeping the skin firm and free from wrinkles. There certainly is no remedy for wrinkles after they come. It should be remembered, however, that an amiable temper, a clear conscience and freedom from a disposition to worry over the petty annoyances of life, are qualities of mind and heart that will keep the face free from wrinkles and beautiful to the ripest old age. A habit common with studious children and those who are earsighted is to knit the brow. This often causes premature lengthwise lines in the forehead.—*Hall's Journal of Health*.

NO HIDDEN PLACES.

It is not a good plan to have the space under the kitchen sink boxed in, especially if servants are employed to do the house work. A sink closet is pretty sure to degenerate into a catch-all for dirty cloths and other rubbish which the servant is too lazy or thoughtless to dispose of. If used as a receptacle for pots and kettles, it is certain to be allowed to become foul with dirt, and, like "Aunt Chloe's" closet, get a "clarin' out" only at long intervals, if at all. Such hidden places under the sink are liable to become damp through leakage or slopping over, and this not only increases the uncleanliness, but adds much to the danger. For these uncleanly spots are

hot-beds for the growth and dispersion of disease germs, and therefore should not be tolerated for sanitary reasons.

In fact, every nook and corner in the kitchen should be "above suspicion." The cooking utensils ought to be put where they will be at once convenient and open to the air and light. The whole kitchen and all its accessory apartments—pantries, closets, etc.—should be flooded with light, and so arranged that they can be thoroughly ventilated. With these two aids, and frequent cleaning, the kitchen will be as sweet and wholesome a room as any in the house—as it ought to be.—*Examiner*.

HINT TO MOTHERS.

"I need a new carpet for my dining-room," commented a woman recently, "but I tell the children while they are so careless at the table the old one will do as well. It is a Wilton, worn to canvas, and on occasion the maid actually takes a scrubbing-brush to the grease spots."

"Why, do you know," replied her companion, "I bought a new one this spring on purpose to improve my children's manners while eating. They greatly admire the freshened room, and it is a matter of pride with each one as he gets down from his chair to see how few crumbs he can leave."

This is a whole sermon in itself. Children are peculiarly susceptible to the beauty or otherwise of their surroundings. They may not be able to voice it—may not be conscious of it, even, but it is none the less a potent influence on their behavior. "I used to notice," said an observing person once, "in a family which I visited quite frequently, that when my visit was confined to a chat in the library, a lovely, ennobling room, full of books and sunshine, if the children were visible at all they were exceedingly mannerly and charming, while on occasions when I would go down informally to the home luncheon or dinner, their behavior was quite different. The room was dark and sunless and the belongings good, but with all freshness worn off. I finally attributed the change in the children's conduct to their different environment."—*Times*.

HALF A MILLION IMMIGRANTS IN 1890.

According to Bradstreet's, during 1890 the total number of immigrants arriving in the United States from foreign countries was 491,026, a gain over the preceding year of 65,000, or 15 per cent. The bulk of the increase was found in arrivals from three countries in central and southern Europe—Austria-Hungary, Poland, Italy—and, in fact, these three countries may be credited alone with supplying more than the entire increase noted, as their total gain over 1889 was 69,000, or 4,000 more than the total net gain. The arrivals of British immigrants showed a heavy falling off. German arrivals gained slightly, and Russian immigrants were also more numerous than in 1889. The total number of British immigrants was 120,567, a decrease from 1889 of 12 per cent. The statistics of arrivals at leading ports show that New York received 398,396, or nearly 81 per cent of the total; Boston received 30,971, or 6.3 per cent; Baltimore, 29,125, or 6 per cent; and Philadelphia, 23,434, or 4.7 per cent.

ONE GOOD THING.

There are now beginning to appear in the cutlery stores many knives and other articles on each of which is stamped the word "Germany." The McKinley bill requires this. In the custom house and at sea on their way back to Germany are hundreds of thousands of dollars' worth of such goods which are not stamped "Germany." A large dealer in cutlery, in discussing this effect of the bill, said yesterday that the market had been flooded with knives and cutlery of all sorts stamped "Providence Cutlery Company," or "New Bedford Cutlery Company," but nevertheless of German make, and of such inferior material that the men who bought them vowed they would never again buy an American knife or tool. Our American cutting tools are the best in the world, and hereafter they will not suffer from unfair competition.—*American Economist*.

TAX-EATERS IN AMERICA.

Among the returns of the census are tables of taxes in various states and cities. The costs of government are indicated, and it appears that while ten dollars per head serves for municipal government in Philadelphia, the government of New York City requires fifteen dollars. It is stated that on the pay-rolls of New York there are at least twelve thousand persons getting on the average one thousand

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dollars apiece. With such an army of tax-eaters, no wonder that the "politicians" make strong fight for place and power. The taxes are excessive, the waste great, and the respectable citizens, in the minority, grumble, but pay.

THE INSANE OF THE LAND.

The superintendent of the census makes public a bulletin in which are given statistics upon the subject of asylums for the insane in the United States. The bulletin shows that the total number of insane persons treated in both public and private institutions during the year 1889 was 97,535, while during the year 1881 there were 56,205 treated, showing an increase in the nine years of 41,330 or 73.53 per cent.

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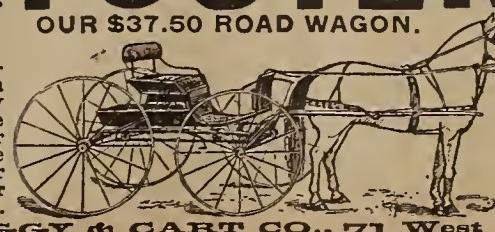
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Our Household.

LACK OF A PEDIGREE.

JOSEPHINE HILL.

My heart is heavy, and my life is sad,
There is nothing at all to make me glad;
My days are spent in one vain regret,
And to a doleful tune these words are set:
I am wretched, I cry,
Oh, let me die!
For God, when he created me,
Forgot to give me a pedigree.

He gave me health, what's that to wealth?
A moderate share of looks and brains;
(I know enough to come in when it rains),
And though as a Venus I cannot pose,
Because I have a turned-up nose,
Still, very well pleased with my lot I'd be
If I could only boast of a pedigree.

In vain I scan my ancestral tree,
In the hopes of finding a pedigree.
No lords or dukes, no pillars of state,
Not even a soap-fat man grown great;
No lager beer to lend a cheer,
And in its mighty foam to rear
A reputation staunch and grand,
And tired and dejected I sadly stand;
For a person without a pedigree
Is, socially speaking, a nonentity.

This lack of a lineage's the ban of my life;
It cuts to the heart like a two-edged knife.
It is brought to mind at every turn,
And more and more my fate I mourn.
If I happen to comment on a pretty canine,
I meet with a retort as bitter as quinine:
"Oh, yes, he's not only pretty, as you well
can see,

But he comes of a registered pedigree."
"Oh, heaven!" I cry, "can this thing be—
That even a dog is ahead of me?"

If I flee for rest to the bright countree,
Eveu there, alas, I am not free.
I mark a frisky colt at play,
And immediately hear the old farmer say:
"You're right, for (resting his foot upon a
rock)

That filly comes of thunderiu' good stock."
I turn chagrined, and homeward go,
My heart is sad and my life full of woe;
And as I wend my way along,
I wonder if in the heavenly throng
A warm or cold reception there'll be
For those who on earth had no pedigree.

WOOD CARVING FOR THE BOYS.

BY KATE KAUFFMAN.

No. 3.

It occurred to me the other day that I had never told the boys how to clamp their work to a stout, heavy table. I know, however, that all boys have seen carpenters and cabinet-makers at their benches. Yes, that is the way. An ordinary table is lower than a bench, but at the table you can sit very comfortably.

By this time you ought to wish to make some article that will be useful in the family. If you wish to please your mother you might select something like the bric-a-brac shelf given in the picture; or if you prefer to honor your father with a delicate attention, you might make him a foot-rest like No. 2. No. 3 is the side view. Just see how simply this is constructed. It needs only about a dozen screws. I think it would be an improvement to have the top cross-piece (where there is a design of over-lapping leaves) deeper, so that the top of the stool might open with hinges and disclose a place deep enough to hold a pair of slippers and the book the owner of the slippers happens to be reading in the evenings. It is often very provoking not to find one's book handy.

Mr. Ben Pitman designed this foot-rest and the other patterns I have given you. He lives in Cincinnati, in a house just full of carved doors and mantels and artistic furniture. He used to send a beautiful pamphlet with pictures of his house

1st issue of the LADIES HOME COMPANION there were some illustrations which showed exactly how to fasten your work and hold your tools when carving. Everyone who takes the FARM AND FIRESIDE ought to have the LADIES HOME COMPANION also. Send for it right away if you haven't already subscribed.

On the bric-a-brac shelf there is not much room for carving, but between the shelves you could put that "shingle pattern" that I taught you. Under the lower shelf each point of wood has a slight ornament. If you are smart you can cut out a paper pattern of the side brackets which support the shelves. Take the picture with you to the nearest planing-mill and no doubt the workmen can help

derly manner on the kitchen table, and with plenty of hot water and soap (or, better, a little ammonia in the water), wash the glassware first; rinse it in clear, hot water, and wipe with a clean towel. Next, wash and rinse the cups and saucers, then the teaspoons and knives and forks, wiping them while they are hot. Perfect drying of dishes after they are washed is an important matter, and this can only be done with clean, dry towels. An ignorant, careless dish-washer will often use tepid water; and then, attempting to dry the dishes before they are thoroughly drained, will soon have her towels soiled and wet, and be unable to give them that polish which dishes should always have. She will often pile her pan full of dishes pro-

life may be saved, no true mother will count any painstaking a hardship.

MAIDA McL.

SAUCES FOR THE FARMER'S HOUSEHOLD.

BY ELIZA R. PARKER.

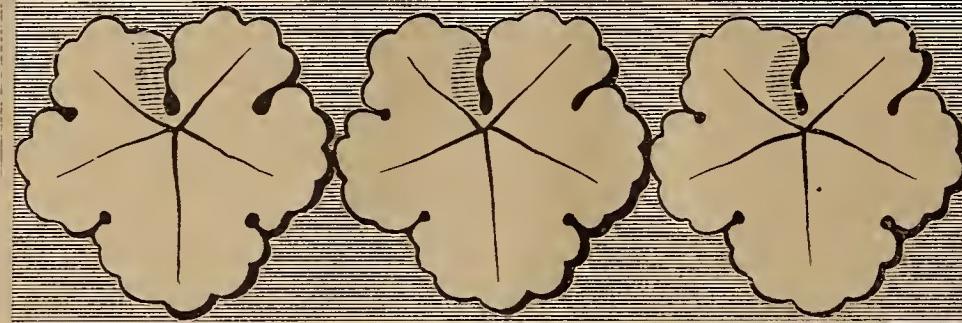
As all good cooks know, sauces form a very important item in the proper seasoning of most dishes, yet many country housekeepers are detained from using them on account of the expense of purchasing them from first-class grocers, where, when bought, it is only possible to obtain them of a good quality. Yet very many excellent sauces may be made at home, and as the farmer's wife can have most of the ingredients without cost or trouble, no household should be without such seasonings, which may be prepared from time to time. As the season for some of these sauces is now approaching, the following recipes will be found useful:

BAY SAUCE.—Take one pound of salt, four ounces of ginger and one half ounce of cloves, all ground, six pods of red pepper, a dozen heads of garlic, cut fine, with a teacupful of grated horse-radish. Gather the tender leaves of the black walnut, and chop fine; put a layer in the bottom of a jar, then another of the mixed ingredients. Continue until the jar is full. Cover with strong vinegar, set in the sun for two weeks, bottle and set aside for several months. This is an excellent seasoning for fish or game sauces.

WALNUT CATSUP.—Take forty walnuts that are half grown, bruise in a mortar; strain off the liquor and let stand until it is clear. To every pint of juice add half an ounce each of allspice, black pepper and ginger root. Boil all together one hour, then add one pint of vinegar, half an ounce of salt, two heads of garlic and a tablespoonful of grated horse-radish. An excellent sauce for cold meats, fish or game.

HORSE-RADISH SAUCE.—Scrape one tea-cupful of horse-radish, mix with a tea-spoonful each of white sugar and fine salt; pour over a pint of vinegar. Bottle and seal.

PEPPER-SAUCE.—Take one dozen pods



WOOD CARVING.—No. 4.

you. If you happen to have some nice cherry or walnut boards, your shelf can be made at very little expense. I should not have thick boards. Notice the neat bevel on the edges of the shelves. There is no use to define "bric-a-brac" if you look at the picture. See; it means plates and vases and jugs, cups, pitchers, etc.

There is a little tool I forgot to tell you about—a stamp. My stamp is simply a large nail, the end of which is filed into six sharp points. If you look at the bands of carved leaves, No. 1 and No. 4, you can see that the leaves stand higher than the ground-work which has been cut away, and finally this is roughened with the stamp. In No. 1 I advise you to leave out the berries which hang down by straight stems. They add a great deal more to the difficulty of the design than they do to its beauty, and that doesn't pay in wood carving or anything else.

Mark off the width of your pattern and draw the lines with your pencil; then having cut an ivy leaf out of stiff card-board, lay it down in the proper place and mark around it with a sharp pencil. Remove it so as to slightly lap over the one already drawn, and draw around it as before. Continue in this way till your band is as long as desired. With your parting-tool go over the lines which run along the edges of the band. Then take your chisel, fit it around the outline of the leaves, holding it upright, and strike it with your mallet. When you have thus gone over the whole design, cut out the wood between the leaves; do this very neatly. Do not aim to have the leaves in very high relief; it will give you too much digging and look coarse, after all. Lower each leaf where it seems to go under the next one, and put in the leaf-veins with the parting-tool. Roughen the ground by holding your stamp in an upright position, hitting it with a hammer or mallet.

After describing the ivy-leaf pattern it is hardly necessary to describe minutely the band of geranium leaves; besides, the illustration is so good you can see very well how it should be carved. I wish you good luck in making them.

HOME TOPICS.

WASHING DISHES.—To an inexperienced person this may seem a strange subject to write about. "Why, anybody can wash dishes," they say.

That is true, anybody can wash dishes; but to do the work thoroughly, quickly and carefully, requires care and skill rarely found in the average servant, at least. Before taking the dishes from the table, wash all those

miscuously, and knocking the pieces together, some will almost certainly be cracked, chipped or broken. I know of nothing that tries the patience of a housekeeper more than to have her dishes cracked or chipped. I would rather a dish be broken outright, for that will sometimes happen to the most careful; but chipping is always the result of carelessness.

SILVER POLISH.—A simple but efficient silver polish is made by putting half a cupful of whiting into a bottle and adding half a cupful of cold water and an ounce of ammonia. Shake the mixture well before using. Wet a flannel cloth and rub the silver with it, and stains will disappear as if by magic. It is also good to clean brass or nickel.

HINTS ABOUT THE BABY.—A healthy, happy, well-nourished baby is a well-spring of delight. He sleeps soundly, is never cross, and is a pleasure just to look at. The first baby

is too often the subject of experiment. The young mother has had no training whatever to fit her for its care, nothing but her unspeakable love for the little one given in her charge to guide her. If the mother is so fortunate as to be able to nurse her child, a blessing which is not always

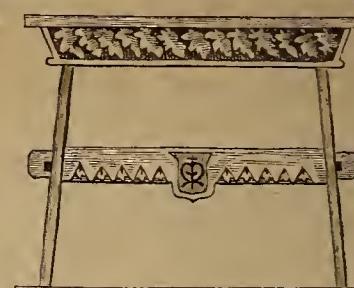
prized by her, she should govern her diet with care. While sour fruit may be eaten in moderation, pickles and vinegar, as well as every kind of food known to produce constipation, should be avoided. Milk or cocoa are much to be preferred to either tea or coffee as a drink. The nursing mother should avoid all excitement, overwork or overheating, as these effect her milk unfavorably. If the mother does her own work it is better to let many things go undone than to so tire herself out that she cannot properly nourish her baby.

If the baby must be fed from a bottle, use only the black rubber nipple, which can be turned inside out and washed. Too great care cannot be used in keeping the bottles sweet and clean. Physicians now recommend that milk for feeding babies be sterilized. Aparatus for sterilizing may be bought; but a common steamer answers the purpose very well. Put the milk into pint glass jars, put the tops on loosely and set the jars in a steamer over a kettle of water. Let the water come to a boil and keep it boiling thirty or forty minutes, then screw the tops of the jars down and set them in a cool place.

Handle baby gently, give him plenty of pure air and sunshine. Keep him quiet, and above all, give him your personal attention, and do not trust him to the care of an ignorant nurse-girl. Keep him from exposure to the damp, chill air of evening. Keep his stomach and little feet warm with soft, flannel garments, and do not let him be exposed to a draught, and you will be doing much to ward off the ills that babies are often heir to. Patient, unremitting, judicious care is necessary. And while this makes the care of baby no light charge, yet if by it the precious little



No. 2.



WOOD CARVING. No. 3.

of red pepper; take out the stems, cut in two, pour over three pints of vinegar. Boil down to one quart, strain and bottle.

RED PEPPER CATSUP.—To four dozen large peppers allow two quarts of strong vinegar, one quart of water, five small onions, chopped, and three tablespoonfuls of grated horse-radish. Add salt, pepper and spices, boil ten minutes, stir in a tablespoonful of celery seed and sugar each. Bottle and cork.

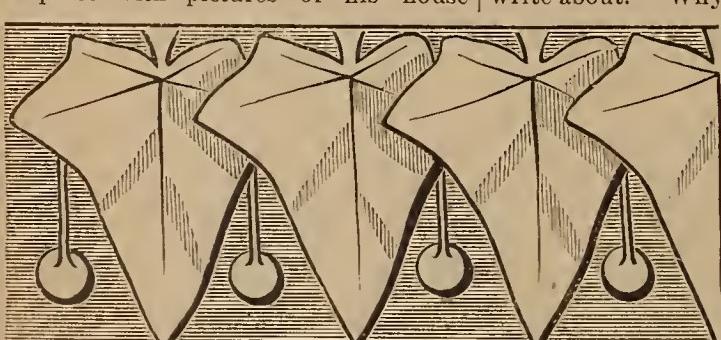
HOME-MADE WORCESTERSHIRE SAUCE.—Add to one quart of vinegar three quarters of an ounce of cayenne, three heads of garlic, chopped fine, fine peppercorns, a dozen whole cloves, half a dozen allspice and a blade of mace. Cover and let stand twenty-four hours. Strain, add a pint of good, home-made wine, put in a jug, cork and let stand two weeks. Bottle and seal.

SALAD VINEGAR.—Put four ounces of tarragon, two ounces of summer savory, half an ounce of mint and three bruised shallots in a jar; pour over a quart of hot vinegar, cover and let stand eight or ten days. Strain and bottle.

SPICED VINEGAR.—Pound three heads of garlic in a mortar with two tablespoonfuls of coriander seed, a teaspoonful of celery seed and salt each, half a teaspoonful of cayenne and ground ginger, with the grated rind of one lemon; pour over a quart of boiling vinegar. Bottle when cold.

TARRAGON VINEGAR.—Put in a wide-mouthed bottle, one cupful of freshly-gathered tarragon leaves, cover with a quart of good vinegar, cork and let stand ten or twelve days. Strain and bottle. An excellent seasoning for salads and sauces.

MINT SAUCE.—Pick the young leaves from the stalks of fresh mint, bruise and



WOOD CARVING.—No. 1.

ornaments to any one who wrote to him with stamp enclosed. You might try and see if he is still so obliging.

The bric-a-brac shelf I found in the Art Amateur, a magazine which gives fine ideas on all artistic subjects. And that reminds me. In an article in the February

in the kitchen—tins, sauce-pans, grid-irons, etc.—and put them away. Then take the dishes from the table, first scraping them as clean as possible with a knife; otherwise the water will get dirty very soon and need to be often changed. Pile the dishes in an or-

put in a wide-mouthed jar. Cover with warm vinegar, let stand a week and bottle. Use in salads and sauces.

AROMATIC MUSTARD.—Mix four tablespoonfuls of ground mustard, a tablespoonful each of flour and white sugar, a teaspoonful of sugar, salt, black pepper, cloves and cinnamon each. Mix smooth with boiling vinegar, add a little salad oil and let stand several hours; bottle.

KEEPING COOL.

Running into Mattie Gordon's one bright May day, I found she was all through her house cleaning. She has a very enticing back porch. I think if I built houses I'd begin with the back part. I'd make it so pretty and convenient and big and airy. If I had anything left for a front part perhaps I'd put it on, but if I couldn't, I could do without it, for I never get time to sit there only once in a long time, and then I feel clear out of place.

Around the end of Mattie's porch she has it all windows, like a greenhouse. This makes it light and keeps out the weather in stormy times; pushed back in pleasant weather it lets in all outdoors. She had it all so clean and cosy I was glad to visit her while she finished some of the early fruit she was putting up.

She bought a small, two-holed gasoline stove for four dollars, and she does all her fruit on this, her ironing, and in pleasant weather sets it outdoors to do her washing, and so saves all the scrubbing one must do after that, besides enjoying the outdoor air. On damp evenings it heats the dining-room very nicely, so that they have the benefit of it all summer. For getting supper, it is all they want, so that a fire in the big stove is not necessary only on large baking days.

Much of our housework can be simplified if we set out to do it. The difference between a good manager and a poor one is more apparent in housekeeping than anything else.

C. I.

BUSINESS WOMEN'S DRESS.

The illustration of this article, entitled "Business Dress for Women," is presented to the public, not as a garb we recommend at present, but as the design which we furnish in response to the demand made at the last session of the National Council of Women. We have not the least desire to urge its acceptance at present, because the conventional dress of the day is so strikingly different that the contrast would be out of all proportion, and the attention attracted consequently marked and unpleasant.

It is well known that business women generally are greatly hampered by the weight, pressure and length of their clothes, and taking all these errors into consideration, we have laid out a plan of attire which cannot fail to meet the requisite demands of health and ease, and which, were it not for its extreme novelty, would appear neither *outre* nor inartistic. The length of the gowns shown in the picture is designed to preserve the line of harmony which cannot be retained when the dress reaches a point half way between the knee and the ankle. Every principle of grace demands that all gowns shall be one of three lengths; that is, that shown in our illustration, where the dress reaching just below the knee is met by the neat and perfectly-fitting garter of the same material; that which just clears the ground,



HANGING BRIC-A-BRAC SHELF.

and the light, properly hung train appropriate only for house wear and evening dress. The lightness and freedom given the limbs by means of a skirt which reaches just below the knee is not generally known to women who have not taken gymnastic training; but those who have personal knowledge of the latter garb can testify to its ease and comfort.

The Business Woman's Dress, as designed by us, is made on the gown form and worn over a divided skirt or a leglette. The material used in such gowns should be of good English or Scotch cheviot, except for hot weather, when very light weight wools or poplinette should take their place. We claim, however, that any woman who will follow faithfully the instructions of the Jenness-Miller system by adopting our mode of underwear, and having her dresses made on the gown form, may be thoroughly equipped for business if her skirts just clear the ground and her boots have broad soles of sufficient thickness to support the foot, toes wide enough to amply accommodate their occupants, and broad, low heels, which prevent the foot from becoming distorted by equally distributing its weight.

We do not, however, wish it understood that this dress is designed as a uniform for business women, but is offered rather as a suggestion for future street dress to women who are or are not engaged in earning their living. Women in business, more than any others, perhaps, should be attractively and neatly dressed, and there is nothing in the accompanying plan which could detract in the least from their appearance, or from that of others not similarly engaged.—*Bastien Le Farge, in Jenness-Miller Magazine.*

A CHAPTER ON PICKLES.

CUCUMBERS, ENGLISH STYLE.—Carefully sort them, reserving the largest ones for these pickles. The medium-sized ones, counting three hundred to the bushel, are the desirable ones. Place them in empty beef-barrels and cover with brine strong enough to float a potato; the juice of the cucumbers soon weakens the brine, and it should be drawn off and poured over again, adding a little more salt. They should be heavily weighted, so as to keep them under the brine; those that float to the top will be soft. When wanted for use, take them out of the brine and place in fresh, cold water for several days, changing daily. Use the strongest whiskey or white wine vinegar, allspice and pepper to taste. Use the vinegar cold, and do not scald the pickles; if the vinegar is strong enough they will keep. They will have a dull yellowish-brown color. So many dislike green pickles made in brass or copper kettles, that this kind is more salable.

BOTTLED PICKLES.—Pour boiling water over them and let stand four hours; to every gallon of vinegar take
1 teacupful of sugar,
1 teacupful of salt,
.1 teaspoonful of pulverized alum,
1 ounce of cinnamon bark,
1/4 of an ounce of whole cloves.

Boil spice and vinegar and pour over the pickles; seal while hot.

SWEET CUCUMBER PICKLES.—Take ripe cucumbers, cut out the inside, pare and slice in squares an inch or two long and one inch wide. Take seven pounds and boil till tender in weak salt water, then drain. Put in your porcelain kettle

1 quart of vinegar,
3 pounds of sugar,
1 ounce of cassia buds,
1 ounce of cloves,
1/2 of an ounce of allspice.

Boil together, then add the cucumber and simmer two hours.

TIP-TOP PICKLE.—Take one peck of green tomatoes and one dozen large onions; slice both on a slaw-cutter. Have them in separate vessels, sprinkle salt between the tomatoes and let them stand two hours; pour scalding water over the onions and let stand till wanted. Then squeeze them both out and arrange them in a crock in alternate layers, sprinkling between celery seed, white and black mustard seed. Pour over this a quart of vinegar and a pint of sugar brought to a boil. It is ready for use when cold.

PICALILLY.

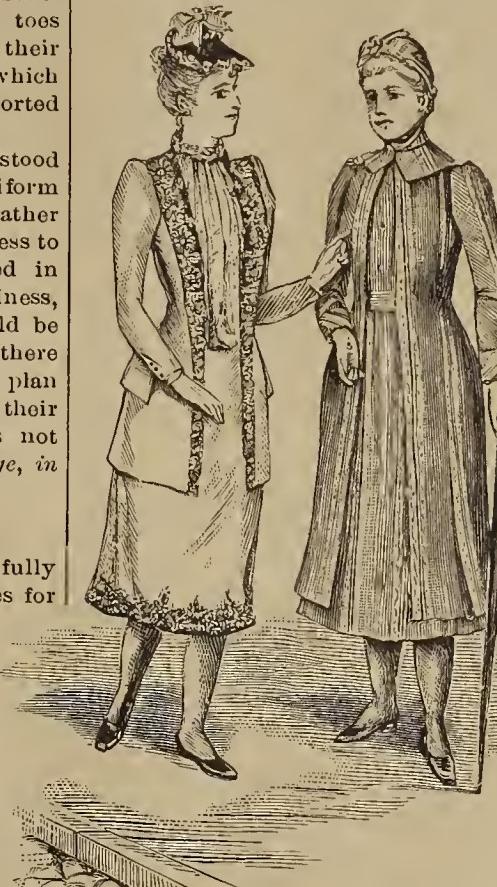
2 dozen large cucumbers, chopped,
2 quarts of small onions, whole,
1 peck of green tomatoes, chopped,
1 dozen green peppers, chopped,
1 head of cabbage, chopped.

Sprinkle one pint of salt over this and

let it stand over night, then squeeze out very dry. Put in a kettle

1 gallon of vinegar,
1 pint of brown sugar,
1/2 pound box of Coleman's mustard,
1/2 ounce of turmeric powder,
1/2 ounce of cinnamon,
1 tablespoonful each of allspice, mace
and celery seed,
A little horse-radish.

Cook the mess slowly two hours, then add two hundred small pickles, just as it is to come off the stove. Add the mus-



BUSINESS DRESS FOR WOMEN.

tard last, as this thickens it and it is apt to burn.

If one's cupboard contains a few jars of each of these pickles, they will be well equipped for winter.

CUCUMBER PICKLES.—One hundred green cucumbers about two inches long will fill four glass quart jars. Soak twenty-four hours in rather strong brine; then pour off the brine and rinse in clear water. To this number of cucumbers use

3 quarts of pure cider vinegar,
1 cupful of sugar,
1 ounce of whole cloves,
1 ounce of stick cinnamon,
1 ounce of small, black peppers,
A little horse-radish, sliced,
A few small, red peppers.

Scald the cucumbers in the vinegar. As soon as the vinegar is scalding hot, dip them out, fill the cans, and then pour the vinegar over them till the can is full. Seal hot.

CHRISTIE IRVING.

FRUIT AT MEALS.

As a rule, a fruit dessert in the evening and after a mixed meal ought only to be lightly indulged in, for the average stomach will but rarely tolerate a heavy influx of such cold and usually watery

aliments as fruit. This is not the case if the fruit is eaten before or between the meal courses. A ripe melon eaten with salt or butter, before or immediately after the soup, can be freely indulged in. Experience teaches us that stewed or raw fruit may be largely taken between courses. In many parts of the continent this custom prevails; the Germans eat stewed fruit with many meats, and in warmer climates, such fruits as grapes, plums, figs, melons and sweet lemons are habitually eaten with all kinds of dishes, or as palate refreshers between the courses.—Food.

FRIGHTFUL DEATH RATE OF JULY.

The mortality among children is startling in the summer months, cholera infantum then reaping its harvest of death. Out of a total of thirty thousand deaths from this dread disease, 12,468 occurred during July.

The chief cause of this frightful death rate is improper food. Mrs. I. J. Woodmansee, of Spencerport, N. Y., had an experience that will be of value to every mother. Her baby was taken very sick with bowel trouble, and nothing helped the child until Lactated Food was used, when health soon returned. All through the summer when cholera infantum was raging, little Edna lived on this Food, and kept well and strong.

A trial can costs but 25 cents (of druggists or of Wells, Richardson & Co., Burlington, Vt.) and mothers do their children grave injustice when they refuse to use this pure food that sustains and nourishes the life that would otherwise expire.

SILKS SATINS AND PLUSH.—A nice package of pretty pieces, all colors only 10c. 3 lots 25c. Western Supply Co., St. Louis.

SILK RIBBON REMNANTS; Large lot new colors, all widths, yard and over in length, Box 35c., 3 for 90c. Satisfaction guaranteed. LADIES' ART CO., Box 584, St. Louis, Mo.

PERFECT FITTING DRESSES.

Any Lady Can now Learn to Cut Perfect-Fitting Dresses.

No one using a Chart or Square can compete with the McDowell Garment Drafting Machine in Cutting Stylish, Graceful and Perfect-Fitting Garments. Easy to Learn, Rapid to Use, Fits any Form, Follows every Fashion. An invention as Useful as the Sewing Machine.

Free 30 days to test at your own home. Send for Illustrated Circular.

THE McDOWELL CO., 6 West 14th Street, New York City.

We know the advertisers to be thoroughly reliable, and that their machine is a really wonderful invention.—Editor Ladies World.

DO YOU OWN TOKOLOGY

Mrs. M. S. Ramsey, of Cedar Gap, Mo., writes: "Three years since I procured **TOKOLOGY**, a **Complete Ladies' Guide** in health and disease. I followed its teachings in two instances with happiest results. I cannot say enough in its praise. I ask every woman: Have you read **TOKOLOGY**—if not, then get it at once—its value cannot be estimated in money." Mrs. K. writes: "Send me an outfit for **TOKOLOGY**. My aunt in Dakota says: 'If you must sell books, sell **TOKOLOGY**, as it is, next to the Bible, the best book I ever read.'" Sample pages free. Agents wanted. Prepaid \$2.75. ALICE B. STOCKHAM & CO., 277 Madison Street, Chicago, Illinois.

44D **A \$10 BOOK FOR 25c.** Conklin's Handy Manual of Useful Information and World's Atlas contains the cream of a whole library; a marvel of completeness. Edition of 1891 contains complete official census of 1890, population of every State and Territory, also of all cities of 6000 or over in 1890, 1880 and 1870, the McKinley Bill, new Copyright Law, Appropriations of Congress, complete political information, valuable points of law for every day use, best records to date in all kinds of sports, besides information on 2000 subjects of value to everyone. The volume has 50 full-page maps in colors, with a description of every country in the world. Over 1,500,000 copies sold.

PAGES A Golden Harvest for Agents. Edition of 1891 selling like wild-fire. Agents making \$5 to \$15 a day. Send 25c. for agent's terms and copy bound in limp cloth or 50c. for copy in library style. LAIRD & LEE, 203 Wabash Ave., CHICAGO, ILL.

MY OXFORD WIFE SAYS SHE CANNOT SEE HOW YOU DO IT FOR THE MONEY. \$12.50. Improved Oxford Singer Sewing Machine; perfect working reliable, finely finished, adapted to lightest heavy work, with a complete set of the latest improved attachments free. Each machine guaranteed for 5 years. Buy direct from our factory, and save dealers and agents profit. Send for FREE CATALOGUE. OXFORD MFG. COMPANY, DEPT. 10, CHICAGO, ILL.

Premium No. 724.

ICE-CREAM

In One Half Minute.



The **Jack Frost Freezer** is made on a new and scientific principle, that freezes the cream instantly.

Instead of having the ice and salt outside of the can containing the cream, in this new and improved freezer the cream is on the outside, and the ice and salt are inside of the cylinder. It saves its cost very quickly in ice, salt, time and labor. A few cents' worth of ice and salt will make enough ice-cream for twenty-five persons, and a child can easily operate it. It is simplicity itself, as there is no gearing to get out of order in using, no oily cog-wheels or iron work. It makes smooth and delicious creams and ices, and is free from danger of metallic poisoning. The cream may be frozen in the warm kitchen as quickly as in the cool cellar. It is impossible for the salt water or ice to leak or come in contact with the cream.

IT IS THE MOST PERFECT ICE-CREAM FREEZER MADE.

With the size we offer you can make from one pint to two quarts of ice-cream at one filling. Larger sizes are made, but this is large enough for most families, as the pan may be refilled several times and a large quantity of cream frozen in a short while.

Given as a premium for 12 yearly subscribers to this paper.

Price, including one year's subscription to this paper, \$3.50.

The freezer must be sent by express, charges to be paid by the receiver. Name your express station if different from your post-office. Address all orders to

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Our Sunday Afternoon.

WANTED!

WANTED: Men.
Not systems fit and wise,
Not faiths with rigid eyes,
Not wealth in mountain piles,
Not power with gracious smiles,
Not ever the potent pen;
Wanted: Men.

Wanted: Deeds.

Not words of winning note,
Not thoughts from life remote,
Not fond religious airs,
Not sweetly languid prayers,
Not love of scent and creeds;

Wanted: Deeds.

Men and Deeds.

Men that can dare and do,
Not longings for the new,
Not pratings for the old;
Good life and action hold—
These the occasion needs;

Men and Deeds.

—The Christian Commonwealth.

BEREAVED.

LET me come in where you sit weeping—aye
Let me, who have not any child to die,
Weep with you for the little one whose love
I have known nothing of.

The little arms that slowly, slowly loosed
Their pressure round your neck—the hands
you used
To kiss. Such arms, such hands I never knew.
May I not weep with you?

Fain would I be of service—say something
Between the tears that would be comforting,
But ah! so sadder than yourself am I,
Who have no child to die.

—J. W. Riley, in the Century.

SIGNS OF THE TIMES.

THIS signs that mark the coming of Christ are about all in the past. Christ first foretold the destruction of Jerusalem and the temple. It was fulfilled to the letter. The foundation of the temple was removed and the ground on which it stood was plowed up, as the prophet Micah had foretold: Micah 3: 12—"Zion shall be plowed as a field." The scriptures cannot be broken. Then commenced the slaughter of the saints. About seventy million were put to death under Pagan and Papal Rome. We have passed by all that. Then the signs given in Matt. 24—the sun and the moon darkened and the stars falling, are in the past.

The prophet Nahum (Nahum 2) tells us that in the last days the chariots (or cars) will "run like the lightnings," and "seem like torches;" "they shall jostle one against another," etc. No carriages ever run one against another except the cars. Then Daniel says (Dan. 12): "Many shall run to and fro and knowledge shall be increased."

About all the inventions of to-day have been gotten up in my day. So we can truly say, "It is the dawning of the day." Then look at the state of religion. Jesus said: "And while the bridegroom tarried they all slumbered and slept." Many churches are in their Laodicean state—neither cold nor hot. God says: "I will spue them out of my mouth." Then we are to-day living where there is a form of godliness without the power.

Christ has foretold us all about these things that should come, and "as it was in the days of Noah, so shall it be in the days of the coming of the Son of man." He also says, "When you see all these things come to pass, then lift up your heads, for your redemption draweth nigh." Thank God we know it, and our heads are uplifted, knowing that Christ is soon coming. Who shall escape? Those that are wholly sanctified and are in Christ Jesus. "Those that were ready went in to the marriage," and no others. Get in before the door is closed; no time to lose.—D. D. R., in *Messiah's Advocate*.

COOL RETREATS.

There is Denver, cool, clear, inviting; Colorado Springs, the home-like Manitou, the abode of the gods; Idaho Springs and the famous baths, and Boulder, a lovely resting place at the foot of the mountains. Garfield Beach, on Great Salt Lake, as a healthful resort is not equalled in this or any other country; nature's champagne flows the year round at Soda Springs, Idaho; the Columbia River, broad and grand, is without a peer for a summer tour, while the beauties of Coeur d'Alene lake and the splendid new region of the Pacific Northwest opens up a line of tourist travel unsurpassed in America. You can have your choice of climate, any kind of sport, and every condition of superb scenery on the manifold lines of the Union Pacific System.

THE CROWNING DAY.

UR Savior when on earth was crowned, but it was with a crown of thorns, a crown that was plaited in malice and worn in anguish.

The sons of God in this world, whatever their hopes or aspirations, are not crowned. They are pilgrims and strangers, they are toilers and sufferers. They have received the kingdom as little children, but have not entered therein nor received their crowns. Scripture representations of our Savior do not exhibit him with the crown while on earth or in heaven. No halo of glory surrounded his head except on the Mount of Transfiguration, when for a brief hour a vision of the kingdom of God was exhibited to his disciples. John saw him on the Isle of Patmos in priestly robes, with radiant countenance and eyes like flames of fire, but still without a crown. He was there as the great High Priest, ever making intercession for us. Again he sees him as the Lamb that was slain, as the Lion of the tribe of Judah, but he does not see him wear the kingly crown until Babylon is fallen, until heaven opens and he who is called faithful and true appears, followed by the armies of heaven, and "on his head were many diadems;" emblems of his imperial power.

At last he shall take to himself his great power, and shall reign. He has gone into a far-off country to "receive for himself a kingdom and to return." His citizens have hated him, his enemies have despised him, but his enemies shall be covered with shame, and on his head shall his crown flourish. He is not crowned merely with the stephanos, the victor's wreath, the prize for which he has struggled, but he is crowned with diademata polla, with the many diadems which signify his absolute, imperial and eternal sovereignty. Now while he is Mediator, all power in heaven and earth is given into his hands, to be employed for human salvation, but then he shall put down all authority and power, and "the Lord shall be King over all the earth, and there shall be one Lord and his name one."

And when he reigns, they who have suffered with him shall also reign with him. To them he says: "I appoint unto you a kingdom, even as my Father has appointed unto me, that ye may eat and drink at my table in my kingdom, and sit on thrones, judging the twelve tribes of Israel." Luke 22: 29, 30. "To him that overcometh will I grant to sit with me in my throne, even as I also overcame, and am set down with my Father in his throne." Rev. 3: 21.

The crowning day is coming, and it shall be a day of joy and glory, of transport and rapture unspeakable, a day of life and gladness, when tears shall be wiped away from all faces; a day when sin and death shall have an end, and when life and glory and immortality shall fill the world with rapture and with peace.—*The Christian.*

THE SUPREME THING.

THIS SUPREME thing for us in this world is to be ready to tell the good news—not to be rich, or famous, or happy, but to have something to say and be able to say it for Christ. He is working for us, not to make saints and angels, but first of all, mouthpieces of the gospel. A miner goes down the shaft and brings up a rough and useless lump of iron. Other workmen come, toss it into the fire, pound it with hammers, draw it through rollers, refine and refine it again till it trembles to a touch, and is sensitive enough to yield to a breath and give expression to the thought of a Beethoven. Then is the ministry of the lump of iron complete. For the last results the silence and darkness of the unexplored vein in the mountains—the discipline of furnace, of anvils and rollers—all were ordained. And if God puts you into the fire and draws you through the rollers it is to make you vocally fit, not first to pitch the anthems of heaven, but to give utterance to the good news of earth; and to be ready for that, whether in pulpit or Sabbath-school or family circle, I count it somewhat grander than to be ready to join the choir of glory and sing the song of Moses and the Lamb.—C. L. Thompson, D. D.

God sent his singers upon earth
With songs of sadness and of mirth,
That they might touch the hearts of man,
And bring them back to heaven again.

—Longfellow.

SENTIMENT ON WHEELS.

MY DARLING." These endearing words, in bright golden letters, stood out in bold relief on the dashboard of a huge four-horse truck in a Broadway blockade of vehicles. They aroused tender memories. The driver looked as unsentimental as possible in his coarse raiment and with his rough manners, but he was not profane or brutal toward his horses. Patiently he awaited the loosening of the jam, while his neighbors filled the air with curses. Finally, his horses becoming restive, he climbed down from his box and soothed them with gentle words and caresses. Then a bystander asked why he called his truck "My Darling."

"Why," he said, "because it keeps green the memory of my daughter, little Nellie. She's dead now, but before she joined the angels she clasped her hands around my neck and said:

"Papa, I'm going to die, and I want you to promise me one thing, because it will make me so happy. Will you promise?"

"Yes," I said, "I'll promise anything; what is it?"

"Then fixing her eyes on mine, she said: 'Oh, papa, don't be angry, but promise me you'll never swear any more nor whip your horses hard, and be kind to mamma.'

"That's all there is about it, mister, for I promised my little girl I'd grant her last request, and, sir, I've kept my word."

Then the blockade was lifted, the big truckman resumed his seat, dashed a tear from his eye and was soon lost in the muddy tide of travel.

"NEITHER."

WELL, I cannot understand why a man who has tried to lead a good, moral life, should not stand a better chance of heaven than a wicked one," said a lady, a few days ago, in conversation with others about the matter of salvation.

"Simply for this cause," answered one. "Suppose you and I wanted to go into a place of interest where the admission was one dollar. You have fifty cents and I have nothing. Which would stand the better chance of admission?"

"Neither," was the solemn reply.

"Just so; and, therefore, the moral man stands no better chance than the out-breaking sinner. But now suppose a kind and rich friend who saw our perplexity, presented a ticket of admission to us at his own expense! What then?"

"Well, then we could go in alike; that is clear."

"Thus, when the Savior saw our perplexity, he came, he died, and thus obtained eternal redemption for us" (Heb. 9: 12), and now he offers you and me a free ticket. Only take good care that your fifty cents does not make you proud enough to refuse the free ticket, and so be refused admittance at last."

LEARN TO FORGIVE.

LEARN how to forgive. Do not carry an unforgiving spirit with you through all your life; it will hurt you more than anything else. It will destroy the happiness of many around you, yet its chief feeding-ground will be found in your own heart. You hate your neighbor. Yonder is his dwelling, one hundred and fifty yards away. Suppose you pass by a wood fire, and as you pass you pluck a half-consumed brand from it, flaming and gleaming, and thrusting it under your garment to hide it, you start for your neighbor's dwelling to burn it. Who gets the worst of it? You find your garments on fire and your own flesh burned before you can harm your neighbor. So is he who carries an unforgiving spirit in his bosom. It stings his own soul like an adder shut up there. I know of some who call themselves Christians who are miserable because of their own revengefulness. Forgive your enemies and get down on your knees and pray for them, and salvation will come into your own soul like a flood. "Father, forgive them." Sweet prayer and blessed example.—Rev. R. V. Lawrence.



The somewhat fanciful picture above was suggested by the genuine pleasure and high spirits shown by one of Allen's workers. When he applied to me he was making just a living, or very little more. I taught him. I caused him to go to work, in his present situation, and he quickly began to earn money at the rate of Over Three Thousand Dollars a Year. Is there a lesson or suggestion here, for you, reader? Probably you can make just as much money as he. Why not try? I undertake to briefly teach any fairly intelligent person of either sex, who can read and write, and who, after instruction, will work industriously, how to earn Three Thousand Dollars a Year in their own localities, wherever they live. I will also furnish the situation or employment, at which you can earn that amount. I charge nothing and receive nothing, unless successful as above. Nothing difficult to learn, or that requires much time. I desire but one person from each district or county. I have already taught and provided with employment a large number, who are making over Three Thousand Dollars a year, each. Here is something new and solid. Full particulars Free. After you know all, if you conclude to go no further, why, no harm is done. Those who feel interested are invited to write at once. I promise you my special personal attention. Address, E. C. ALLEN, Box 1013, Augusta, Maine. Mention this paper when you write.



There are a dozen central-draft lamps in the market, more or less; and every one of them "best" to somebody. Which is best for you?

Eleven of them gather dirt and hide it. You think the lamp smokes. It does; but the dirt is insect-carcasses rotting by day and distilling their fragrance by night. It stays there unsuspected month after month.

One of them has no dirt-pocket; doesn't need any.

Eleven are hard to learn and hard to care for—Who will take care of them?

One is simple and easy.

The one is the "Pittsburgh." Send for a primer.

Pittsburgh, Pa. PITTSBURGH BRASS CO.

Please mention the FARM AND FIRESIDE.



When you write mention this paper.

A BIG OFFER! \$50. MADE IN A MINUTE! If you will hang up in the P. O., or some public place, the two show bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you about one minute, and then if you want to work on salary at \$50 or \$100 per month, let us know. We pay in advance. GIANT OXIE CO., 21 Willow St., Augusta, Me.

If afflicted with sore eyes use Dr. Thompson's Eye-Water

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Our farm.**THE POULTRY YARD.**

Conducted by P. H. Jacobs, Hammonton, New Jersey.

LARGE CHICKS FOR ROASTING.

As the greatest loss of young chicks occurs before they reach what is known as the "broiler" period, the question may well be discussed whether it is more profitable to retain the chicks until they weigh three pounds, or sell them when they weigh only a pound and a half each. The price of the small chicks may be forty cents a pound, or sixty cents for the chick, while a chick known as a "roaster" will sell at twenty-five cents a pound, and may weigh from two to three pounds. There is only fifteen cents difference in the sums realized for the chick weighing a pound and a half and the one weighing three pounds; but it should not cost over ten cents to feed the chick until it reaches the three-pound stage, which leaves only five cents in favor of the larger chick. There are other matters, however, to be considered, and among them is the fact that the larger chick will require no extra labor and care compared with that bestowed on the smaller chick, and there will not be a necessity for hatching them quite so early in the season.

Although much is frequently said about early broilers for the large cities, it may also be mentioned that of late years a demand is growing for what is termed "roasters," which means simply chicks that are beyond the broiler weight. Sometimes they may weigh as much as four pounds and sell for one dollar per chick, but the prices range from twenty cents per pound and upward, often as high as thirty cents per pound being obtained when the supply is short; but as soon as "green" ducks begin to come into market they take the preference over the roasting chickens.

It is seldom that a roaster sells lower than fifteen cents per pound, and it will always bring fifty cents in a good market, which makes it profitable compared with a fowl which sells for ten cents a pound and which is a year old, the old males seldom bringing over seven cents per pound, while the roaster may be either a male or a female. The best time to sell, then, is when the chick is under four pounds weight, as it will bring a larger sum than if it is retained until matured, while the expense of its keep will be very much less than that of a grown fowl. To produce choice roasters the male with the hens should be a Wyandotte, Houdan, Plymouth Rock or Brahma, as the chicks from such breeds or their crosses grow rapidly and present attractive appearances in market.

THE BARN-YARD REFUSE.

The pickings of the voidings of horses and cattle, with the waste grains, hay seed and broken leaves of clover hay which the hens secure, amount to a large quantity, and also afford a variety. That is the reason why the common hen sometimes lays more eggs than the pure breeds. The latter are overfed, get but little exercise, and as all writers teach "fed heavily," the common hen is compelled to work while the pure-bred hen has nothing to do but patiently wait. But nearly all farmers feed corn, which keeps the hens warm, and though the supposition is that the common hen receives only corn, yet no estimate is made of the varied food she picks up in the barn-yard. The fact is that the common hen is better fed, so far as variety is concerned, than the pure-bred, but she must seek it, which she does, and in an industrious manner, her very industry keeping her in excellent laying condition. It pays to keep a few hens in the barn-yard in order to utilize the waste that occurs. The farmer may not notice the loss from waste, but the alert hen, with her keen eyes, does not let a single grain escape her.

HOW TO FEED.

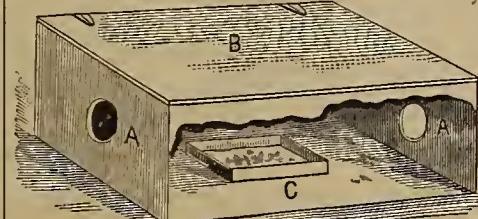
A laying hen and a hen that is fat and ready for market are two distinct creatures. In all flocks it may happen that two or three prolific hens must support the fat drones. There should be no drones in a flock. Separate the laying hens from the others, and feed them on "balanced food," and then endeavor to reduce the fat hens by exercise and diet. Balance the food by

adding the needed elements with the grain, reducing the grain. A variety of soft food, composed of all the needed elements, should be given in the morning. No fixed quantity can be estimated, as appetites differ, but give rather too little than too much. Scatter millet seed and wheat wherever the hens can scratch, or throw it in litter (a few shovelfuls of horse manure is excellent), and make the hens scratch. An hour before night give the grain, scattered, so that each hen can get her share. Be sure and make the hens scratch; a scratching hen is always a layer, as exercise is essential to thrift.

A NOVEL RAT-TRAP.

As rats destroy large numbers of young chicks, and are difficult to catch in traps, or to poison them without at the same time injuring or poisoning the chicks, the illustration shows a cheap and easy mode of poisoning rats without danger to the cats, fowls or chicks. Make a box two feet long, one foot wide and one foot high, (or use a soap box if necessary), and have a top to it that can be raised up. At each end, about four inches from the floor, cut a hole $1\frac{1}{2}$ inches in diameter. Never raise the top unless to put in the feed or to take out a dead rat. Place some corn meal in a pan and leave it in the box. In the illustration the holes are shown at A A, the top at B, and the pan of feed at C.

As the rat will feel safe and secure from the cat, and will prefer the two holes, so as to have better opportunities for escape, it will soon find out the box, and will also soon learn to eat the meal. Once the rat tastes the meal (or other food) and finds it to be wholesome, or free from poison, it will come every night for the meal and bring other rats. Do not poison them at first, but wait until they have feasted for a week, when all their suspicions will

**A NOVEL RAT-TRAP.**

have been allayed.. Then add poison to the meal and you will, in all probability, get them all and be troubled no more until a new generation appears.

Rats can be easily poisoned by baiting them with food for awhile, but it cannot be done suddenly, as they are too cunning and suspicious, and the difficulty is to poison them without danger to dogs, cats or poultry, but with this contrivance there is no difficulty, as the box may be placed in the poultry-house or at any desirable point. The two holes to the box, and the fact that the cat cannot get in, will be such an inducement as a secure retreat that the rats will come to it even when the cat is near.

DON'T STUFF THE HENS.

The capacity of a hen is limited. If you clog the machinery it will not work well. If you fill her with food that is unsuitable she will only store up the surplus, waiting for the substances that are necessary to complete the product, and in so doing she does not lay. Food that is unbalanced will, of course, be readily eaten, but nature cannot be cheated. The excess will be voided and wasted; or if it abounds in the heat-producing element (the cheapest and most easily procured), she has the power to convert it into fat, which is an obstruction to laying; but when her ration is balanced, she is compelled to lay eggs, because she cannot store up a supply in any manner over and above the requisite amount required for the eggs.

RELIABILITY.

In answering advertisements every person should be sure that they are dealing with a reliable firm. In sending away for goods you have to trust a great deal to the firm of whom you are buying. In buying Buggies and Harness our readers can never go wrong when they purchase of the Wilber H. Murray Mfg. Co., of Cincinnati, Ohio. They are better known throughout the U. S. than any other firm in their line. The celebrated \$5.95 "Murray" Harness and \$55.95 "Murray" Buggies are household words the country over. They guarantee every Buggy and every set of Harness that leaves their factory to be just as represented or money refunded. If you have not already received one of their fine catalogues, you should write to them for it.

TURPENTINE FOR ROUP.

Experiments made show that the germs of roup are destroyed when brought in contact with spirits of turpentine. Turpentine, however, is a severe dose to give, even if effectual, and if too much is given it may do damage of itself. To properly prepare it, mix one part spirits of turpentine, one part kerosene and three parts glycerine in a sewing-machine oil-can, and always shake well before using. With the point of the oil-can force three drops of the mixture in each nostril and five or six drops down the throat of the fowl twice a day. Roup is a disease that is almost incurable, being contagious, and gradually exhausts the bird instead of causing instant death. If it appears in the entire flock, the labor of handling the sick birds is often more than the value of the flock; and as roup cannot well be treated on the wholesale plan (that is, without handling the fowls), it is cheaper to clean them out, burn the carcasses, thoroughly disinfect and begin anew. The buildings should be very warm and dry.

THE CHEAPEST FOODS.

The cheapest foods are not always on the farm. The farmer who can buy a cheap article and convert it into a costly one, acts on business principles. The hen that does not produce eggs is an incumbrance. The commercial fertilizers are brought on the farm, and by indirect process are sold as meat, milk, butter, grain and garden crops. When crops are sold they carry away the riches of the farm, and the farm would be impoverished if the farmer did not procure fertilizers. He can produce eggs by procuring the substances that are adapted therefore. The meat and bone of the markets, changed and reduced to an available form by processes known to enterprising business men, supply the needed elements that are lacking on the farm. Egg foods should not be composed of substances that cause a temporary increase of production, but should fulfill their objects because they are really foods, and provide the materials for the eggs.

MAKING THE HEN LAY.

It is the perfect food that produces an egg, because the egg is composed of a variety of substances. Grain is rich in starch and fat, but deficient in flesh-forming and bone-forming substances. In the food these substances are scarce, and the hen is compelled to eat a large amount of starchy food in order to derive the minerals and flesh-formers, and in so doing the excess of starch is converted into fat, a condition not desirable. Fortunately we can give her, in a direct manner, the mineral and flesh-forming materials so necessary for her purpose, in a concentrated form, and in the shape of egg foods composed of the very materials that are identical with those composing the egg itself, thereby reducing the

amount of grain required and producing the eggs at a much lower cost than from excessive feeding. When this is done, the hen—the egg machine—has the complete raw material, and there will be no clogging, but the eggs will result as a natural consequence of a fulfillment of her mission.

WHAT IS AN EGG.

An egg is composed of many substances. The fact that a living chick can come forth from it is proof alone that an egg contains the essential elements of bone, blood, flesh, warmth, feathers, and a covering produced from lime. To us they appear as the shell, the white, the yolk and the lining of the shell next the white. The hen cannot produce the white unless the food contains it, for the albumen is a costly substance in all foods. The yolk contains the food of the chick that mostly supplies the warmth, while the phosphates of the bones and the shell of the egg must be derived from the several forms of lime.

WORKING UP RAW MATERIAL.

The hen is simply a creature adapted to a special purpose: She is an egg-producer—a machine for converting cheap, raw material into a product that is in demand and readily salable. She requires the proper material, however, and the most economical mode of producing eggs through her agency is not to allow her that which is useless, but to supply the elements that can be most easily and cheaply changed from the crude material to the desired product.

THE HEN AS AN EGG MACHINE.

The hen is a creature of domestication, and unlike her untamed sisters of the jungles, depends on man as her benefactor, for whose kindness she repays him well; but she pays only in proportion to what she receives, and as her work is guided and limited by the skill of her owner, her usefulness may be great or little.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Queries desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Grasses for Nebraska.—J. W. K., Bostwick, Neb., would like to know what grasses do best in Nebraska for a permanent pasture, when to sow the seed, amount per acre, and what grain is best to sow with them, if any.

REPLY:—Will some of our Nebraska readers please give the desired information?

Remedy for Yellow-striped Cucumber (or Squash) Bug.—**REPLY BY JOSEPH:**—A subscriber in Missouri asks for a remedy for the yellow-striped cucumber beetle. I use tobacco-dust from one half to one inch thick scattered all around the plants, or a mixture of tobacco-dust and bone-dust. It is not an absolute protection, but it usually keeps the beetles off. I have not yet seen a bug this season, although it is now July; but I do not know how soon they will invade my garden.

Preparing New Land for Onions.—L. C. H., Spring Valley, Ohio, writes: "When is the best time to break a piece of woodland sod that I wish to plant to onions next spring?—Is the Prizetaker the best new variety of onions to raise?"

REPLY BY JOSEPH:—Plow the patch as soon as possible if the sod is tough, or piece rough. This will give time for the thorough rotting of the sod. If the land is mellow, however, and can be easily pulverized, plow in autumn, then harrow with disc or Acme in spring.—I know of no variety of onions more suited to my purpose (for the "new onion culture") than the Prizetaker. Still, I am hearing complaints, now and then, of the plants growing largely to scallions.

Tanning Sheepskins with the Wool.—W. E. D., Peoria, Ill. Try the following: Make a strong lather with hot water and let it stand till cold; wash the fresh skin in it, carefully squeezing out all dirt from the wool; wash in cold water till all soap is out. Dissolve one pound each of salt and alum in two gallons of hot water, and put the skin into a tub sufficient to cover it; let it soak for twelve hours, then hang on a pole to drain. When well drained, stretch carefully on a board to dry, and stretch several times while drying. Before quite dry, sprinkle on the flesh side one ounce each of pulverized alum and salt-petre, rubbing in well. Try if the wool is firm on the skin; if not, let it remain a day or two, then rub again with alum; fold the flesh sides together and hang in shade for two or three days, turning over each day until quite dry. Scrape the flesh side with a dull knife and rub well with pumice or rotten stone.

Sheep-Sorrel.—**REPLY BY BOTANIST OF THE OHIO AGRICULTURAL EXPERIMENT STATION:**—The plant sent by Mr. J. B. B. is the field or sheep-sorrel, *Rumex acetosella*, L. It is a native of Europe, but has become one of our worst weeds. Beginning to flower in May, the



fruit ripens in August. It is not propagated alone by seed; the smallest bit of root will give rise to a new plant. There have been two remedies suggested: One is to give the land a good dressing of lime. The second remedy is to persistently, but lightly, cultivate the ground, especially in hot, dry weather, so that the roots turned up will be killed by the sun. The two remedies might be profitably combined. The *Agricultural Gazette*, New South Wales, of March, 1891, says: "Horses that feed on pastures where sorrel is growing should not be taken on cultivated ground; neither should those fed on hay saved from such pastures, as the seed will germinate after passing through the intestines."

VETERINARY.

Conducted by Dr. H. J. Detmers.
Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Swine-Plague.—W. E. M., Lowden, Iowa. Your pigs are affected with swine-plague, or so-called hog-cholera.

Curvature of the Spine.—F. T., Teegarden, Ohio. Nothing can be done. Too hard pulling probably constitutes the cause, or at least the principal one. If the mare, as I suppose, is yet young, rachitis may constitute the predisposing cause.

So-called Pink-eye.—E. B. P., Westerlo, N. Y. Your diagnosis is probably correct. The disease is infectious, but, as a rule, not very dangerous. As to treatment, consult the same to a good veterinarian, if available. If not, use good care and nothing else.

Heaves the Result of Distemper.—J. K. H., Ogdensburg, Iowa, writes: "What would you do for colts of two years or more, affected with heaves as the result of distemper?"

Answer:—In Iowa I should send them to pasture and exempt them from any kind of work.

Scrotal Hernia.—W. H. C., Maple Hill, N. Y. The best and easiest way to operate a scrotal hernia in a horse is to castrate the animal with covered testicle, an operation familiar to every well-informed veterinarian, who also is the only person who can properly perform it.

Big-jaw.—W. C. G., Spottsville, Ky. The first thing necessary to effect a cure is to remove the cause. Hence, as your inquiry does not give any clue whatever, and as so-called big-jaw, or big-head, may be produced by various causes, I cannot tell you what you want to know.

Thoroughpin.—R. O. J., Jamestown, Ohio. Unless you can remove the cause—unequal distribution of weight and concussion, and too much exercise—you had better leave the thoroughpin alone; especially do not open it, because opening it would be opening the joint, and be followed by serious consequences. For further information consult recent numbers of FARM AND FIRESIDE.

Wart on the Eyelid.—O. T. C., Blue Ash, Ohio. Paint the wart very carefully once a day, by means of a camel's hair pencil or fine brush, with a concentrated solution of corrosive sublimate in strong alcohol, but see to it that none of the above solution gets into the eye. Continue this treatment until the wart presents a shrunken appearance. There is nothing in your letter that indicates a cancerous nature of the wart or papilloma.

A Cow Heaves and Pants.—J. M. M., Monclova, Ohio, writes: "I wish to know what is the matter with a cow that heaves and pants something like a horse."

ANSWER:—A good many things may cause a cow to heave and to pant; for instance, diseased lungs, an overloaded stomach, hot weather, a ruptured diaphragm, etc. You must first ascertain the cause before any remedy can be applied.

Hemorrhage.—G. W. H., Clyde, Mo., writes: "We have a cow that on Tuesday night, June 16th, gave what seemed to be a quart of pure blood; then it began to get its natural color. Just out of one teat on the left side. What is the cause of it?"

ANSWER:—Your cow suffered from hemorrhage in the milk system, or in the lactiferous ducts. It is impossible for me to decide, from your inquiry, what caused the rupture of the blood vessel or vessels.

Rubbing the Teeth of Colts.—M. C., Wyoming, Kan., writes: "As there is more or less trouble in raising young colts, some claim the teeth should be rubbed through or they will not live. Is it necessary to rub the gums of a young colt?"

ANSWER:—Neither the teeth nor the gums of a young colt need any rubbing. The best way to avoid trouble in raising colts is to treat and feed the mare, before and after foaling, in a rational way, like a brood mare, and not like an old plug.

Actinomycosis.—W. D., Crothersville, Ind. You describe a case of actinomycosis. If the tumor is immovable and in the bone, it is incurable, and in that case the best you can do is to fatten the animal and convert her into beef. But don't send her to Chicago, for there they are a little foolish about such things. If the tumor is movable, a cure is possible, but just now I have not the space to give a detailed description of the operation necessary. It has been given in a former number. So write again if the tumor is not attached to the bone.

Sow Eating Her Pigs.—J. H. N., Kingston, N. J. A sow that is eating her own pigs should be fattened and be sent to the butcher as soon as possible, for although she very likely is caused to kill and to eat her pigs by digestive disorders, and by a vitiated appetite, and although such digestive disorders may be removed by a change of diet, etc., such a sow can never be relieved upon. If your sow kills her pigs by lying down upon them—in other words, is so clumsy that she falls down before the pigs can get out of the way—you may prevent it by putting fenders in your pig-pen.

Mane and Tail-Nibbling Colts.—E. B. E., Normal, Ill., writes: "What is the cause and preventive of young colt chewing off its mother's mane and tail? Last year I had that trouble, and the colt did not develop into a large and strong an animal as it should, and I am troubled likewise this year."

ANSWER:—The cause, it seems, consists in a vitiated appetite, produced, maybe, by an improper diet—for instance, a want of saline matter. The temptation will be less if the mane and tail of the mare are washed, first with soap and water, and then with a decoction of gentiana, or something else that is very bitter.

A Hair-eating Cow.—L. S., Horicon, N. Y., writes: "We have a cow that eats the hair off from other animals, and eats hair carded from horses and thrown down within her reach. One winter she ate the tail off of one horse. What is the cause, and what will cure the habit?"

ANSWER:—The cause, probably, consists in some digestive disorder. The treatment, therefore, has to be a dietic one, and to consist in a change of food. It is possible, however, that by this time the hair-eating has become a habit, which will be continued in spite of the very best food. If such is the case, the best advice I can give you is to fatten the cow and convert her into beef.

A Paralytic Calf.—H. L., Salina, Kan., writes: "Can you give remedy and tell what is the matter with our calf?" It came along in February, has bad milk since then until about two weeks ago, when, one morning, it lost the use of its hind legs. It seems as well as ever, and eats grass and drinks milk like a healthy calf. When it walks it uses its front legs."

ANSWER:—Your calf suffers from paralysis in the hind quarters, but what produced it, or whether the paralysis is due to internal or external causes, does not proceed from your description. Neither does it make much difference, because such cases, as a rule, do not often yield to any treatment. If the calf is in good condition, the profitable thing is to convert it into veal.

Probably Malignant Edema.—F. M. S., Chillicothe, Colo., writes: "I lost a six-months-old calf from a new disease. She was swelled on the outside of the throat, but not seriously. The lungs were badly mortified, as was also the lower end of the wind-pipe. We found nothing in the throat or wind-pipe that would show that it was caused by accident. She was sick about twelve hours. The swelling in the throat was all on one side, not had about the size of a teacup. She breathed with her mouth open. She had no cough."

ANSWER:—Your calf probably died of malignant edema, or so-called black-leg. Still, I will not be positive, because the symptoms communicated by you are not what I would call characteristic. Maybe that the most characteristic symptoms have been overlooked.

Eight Questions.—L. H. B., Lessa, N. Y. writes: "(1) Is heaves a hereditary disease? (2) What causes them? (3) What is the proper feed for a horse which has heaves? (4) When

a horse has been doctored and the heaves stopped, is there any way of telling that he has them? (5) What kind of grain should a yearling colt have? (6) Is flaxseed meal good feed for horses? (7) Is there any way of telling how tall a colt will grow? (8) Will a colt that is starved when young (till two or three years old) make as large a horse as he would if he had been fed well?"

ANSWER:—(1) It is not. (2) Any chronic and incurable disorder in the respiratory organs. (3) Green and juicy food and food easy of digestion that is not too bulky. (4) I don't understand that question. (5) Oats. (6) No. (7) There is not, unless the parents and also all the conditions under which the colt will be raised are known. (8) Never.

Capped Elbow.—H. H., Xenia, Ill., writes: "I have a four-year-old mare that has a large swelling on the elbow. It seems hard, and is very sore. I first noticed it about June 1st. I worked her with a tight belly-band, but do not think that caused it. She is not very lame with it."

ANSWER:—What you described seems to be a capped elbow, caused by bruising when the horse is lying down and rests the elbow on the heel end (cork or calkin) of the shoe. As a rule, only horses which have diseased lungs or are affected with heaves, and horses very tired and fagged out, lie down in that way, notwithstanding the pain it must cause them. They do it because that position seems to give more ease to the diseased respiratory organs. The treatment consists in a surgical operation and in removing the causes. Where the latter is not possible—for instance, where the animal suffers from a chronic lung disease—the former, too, is useless, and nothing is left to be done but to give the animal an abundance of bedding and to keep the same barefooted. Only where the causes are of a temporary nature can the swelling (capped elbow) be removed, but the operation required should not be undertaken by anybody but a competent veterinarian.

Anthrax.—D. M. P., Amelia, La., writes: "Many of the horses and mules of our parish have a disease that we call 'charbon.' About three fourths of the animals that take it die. It breaks out with a large lump or swelling underneath the animal. From the time the lump is seen it grows very rapidly and in three days time it is the size of a large bucket. By that time the animal generally dies. If they live through three days from taking they most always get well. There are many remedies that are used here, but I think they are all too severe."

ANSWER:—What you describe undoubtedly is anthrax, or as the French call it, "charbon." Very little can be done by way of treatment, much more by measures of prevention. The best way would be to keep the horses away from swampy places, to confine them to high and dry ground and to water them with good well water or with water from a clean cistern. If this cannot be done, a preventive inoculation, as first recommended by Pasteur, might be tried. If it is desired, I can at present furnish material which, although entirely different from Pasteur's so-called premiere and deuxieme vaccin, I have no doubt will afford protection. It has not, however, been tried on larger animals. I am willing to give it into the hands of a thoroughly responsible and competent person known to me by reputation, but to nobody else, and if such a party applies for it I will give full directions how to use it, and further, furnish it free of charge.

A Lame Mule.—W. M., Edna, Texas, writes: "I have an old mule that has been lame nine months, and although I have tried various liniments she gets no better. I cannot tell what is the matter. At first I thought it might be dislocation of the stifle bone, but subsequently I abandoned that idea. No veterinary surgeon being near I do not know what to do for it. Lately a hard swelling came on the stifle bone, and her hip has shrunk so that the bone shows plainer than the other side. She can walk, but limps, and when she runs she puts her toe to the ground and sometimes rests on it. I did not see her when she first got lame, and my son can give no information of how it happened, but as the laud when moist adheres badly to the feet in hard balls, I think possibly that may have been the cause. Can you tell me what can be the matter and what to do for it?"

ANSWER:—I cannot base a diagnosis on opinion; it is facts that are required, and the facts you give in your inquiry are very poor. My advice to you is to examine the hock joint of the mule, or perhaps also the coronet and pastern joints and you may succeed in finding the seat of the lameness. The only fact of importance given is that the mule puts the toe to the ground and rests upon it, etc. This is somewhat characteristic of spavin or ringbone, hence the above advice. The shrinking of the muscles and the more conspicuous prominence of the bones are attendants of any lameness of long standing.

A So-called Champignon.—R. D. K. P., Newell, Ill., writes: "I have a two-year-old which was castrated five weeks ago. The right side healed nicely, but the left has a bunch hanging down as large, almost, as a tin cup. The operator directed me to let the clamp remain on twenty-four hours and then cut the string on one end of the clamp and let them fall off themselves. I did so, but the left clamp remained for three days, and then I took it away, the other falling off itself in a short time. I noticed, on taking off the clamp, that both the sheath and the spermatic chord were swollen, but in a few days the swelling of the sheath subsided; but in a few days he was smelling like carrion, and the green flies had 'blown' the parts. I began washing him with carbolic acid, diluted, and castile soap, which kept flies away, but the parts would not heal. I used burnt alum, sulphate of copper, etc., but nothing affects the sore. The mass protruding reminds one of a hunk of boiled beef in which there is an admixture of fat and lean. The animal is in fair health and spirits. He was trimmed standing, and acted ugly, getting very hot and sick."

ANSWER:—Both you and the operator are to be blamed, but the latter the most, because it was his duty to remove the clamps. He had no business to leave it to you, and, besides that, he gave you, according to your statement, very bad directions. When the clamps are to be removed, it is not sufficient to cut the strings and then leave them until they drop off. They have to be taken off, then about one third of what has been compressed by the clamps ought to be cut away with sharp scissors, and then the remaining strings of the spermatic chord must be separated, by passing around it with a finger, from the borders of the wound in the scrotum, and thus be allowed to reassume its proper place inside of the scrotum. If this is done, and if every part of the operation is well performed, no such champignon will be produced. To castigate colts standing is bad practice, and often amounts to downright cruelty. At any rate, it is next to impossible for the operator to perform the operation in a proper manner. As it is now, another operation is necessary, for which the colt must be thrown. The de-

generated spermatic chord must be separated from the scrotal sack, perhaps best with the handle of a scalpel, or with a finger, and then another clamp, as high up as possible, must be put on, and in about twenty-four hours it must be removed in the proper way. I would advise you to have the operation performed by a competent veterinarian.

Bloody Diarrhoea.—J. McM., Castle Rock, Col., writes: "What is the best remedy for the following disease: The cattle are taken sick suddenly, and some die at once; then, again, they linger along for a week or ten days. The first symptoms are a disinclination to graze, connected with a violent diarrhoea in most cases, until the discharges look like clotted blood. They are all drawn up and shrink away to a mere skeleton. The kidneys are generally inflamed, the bladder full to bursting, the fourth stomach, or manufold, dry and full of blood, the last gut all inflamed and almost rotten. The stomach, heart, liver and brain are all right; also the lungs. Some call it pleuro pneumonia, some Texas fever, some anthrax, some one thing and some another. It is taking two and three-year-old steers principally, although it has claimed some cows and heifers heavy with calf. We have a good deal of scrub oak here. We have bad dry seasons for several years, and this spring it has taken a change. We have had it very wet here for this county. Some of the cattle are all dried up, and hard in the last bowels. Some recommend a pound of Empson salts to open the bowels, but I don't think you could start them. The loss has been sixty percent in some herds. One herd I know of I think there will be nothing left but two or three bunches that have been well taken care of. If you can give me any idea what it is, I would be much obliged to you."

ANSWER:—According to your description, the disease is neither pleuro pneumonia, Texas fever nor anthrax, but typhoid dysentery, or bloody diarrhoea. It is very fatal, so that not much can be done by way of treatment. Much more can be accomplished by measures of prevention. When the food is sound and wholesome, and the water pure and uncontaminated, the disease does not occur. As I am not sufficiently acquainted with Colorado to be able to point out the conditions under which the causes are produced—the immediate cause, it seems, is of a bacteric nature—and as this disease is of sufficient general interest, and would afford a splendid field of investigation for the veterinarian of the Colorado Agricultural Experiment Station, I advise you to write to either the veterinarian or to the director of the station at Fort Collins.

OHIO BREEDERS' ASSOCIATION.

Mr. W. B. Fasig, of Cleveland, President above Association, writes, "I can say candidly, Quince Ointment is the most valuable remedy in my opinion now before the public." For Curbs, Splints, Spavins, Windpuffs or Bunches, it has no equal. Trial box 15 cents, silver or stamps. Regular size \$1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

Standard Books on Agriculture, Horticulture, Etc., Etc.

For the convenience of our readers we present a list of standard rural books, which we offer at the publishers' prices. They will be forwarded by mail, postpaid, at the prices named. All bound in cloth, except those where a different binding is named.

INSECTS AND INSECTICIDES. By Clarence M. Weed, D. Sc. A new and practical manual concerning noxious insects and the methods of preventing their injuries. Issued in 1891. A complete description of insects affecting trees, vines, plants and flowers; also those infesting domestic animals and cattle, and the insect pests of the household. All fully illustrated. The price of the work is low. Price, postpaid, \$1.25.

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Our Miscellany.

SUMMER YEARNINGS.

Oh, for a wild, weird narrative
To make our blood run cold;
And oh for a nice, cool million
Of dollars, all in gold,
And oh for a cow that will give ice-cream,
And oh for a dish and spoon,
And oh for the time when the frost collects
On the whiskers of the moon.

Oh for an ice-box cold and deep
Wherein to crawl and hide;
And oh for a glacier high and long
On which to take a ride.

And oh for the sound of the skaters' shoes
As they ring in merry rhyme,
And oh for an leeman who
Will sell us ice on time.

—Chicago Post.

SOME butter belongs to the first rauk.
"THE light of other days"—sperm oil.
WET tobacco will relieve bee or wasp stings.
For nausea, lay a little pounded ice on the back of the neck.

IOWA produces more corn than any other state in the Union.

MORE than 8,000 wolves and 850 bears have been killed in Bosnia since 1880.

A TINY gold slipper, stuffed apparently with rice, is a pretty design for a bride's brooch.

"FREDDY, how is the earth divided?"
"Between them that's got it and them that wants it."

A GREAT many people refuse to believe there is a happy hereafter because positive proof is lacking.

THE Great American Desert covers one million square miles. One tenth of this is already claimed and partially cultivated.

Man wants but little here below,
His share must needs be small,
For doesn't everybody know
That woman wants it all?

THE freedom of the individual should never be interfered with so long as the individual does nothing to destroy himself or injure others.

MOTHERS delight in Dr. Hoxsie's Certain Croup Cure; it cures all acute attacks to throat and lungs. Does not stupefy. Contains no opium. 50 cents.

EMERSON says: "The truest test of civilization is not the census, nor the size of cities, nor the crops, but the kind of men the city turns out."

HARRY—"How is it you stay so much later than usual at Miss Pruyne's?" Jack—"Spring cleaning; the old man doesn't dare come down for fear of tacks."—New York Herald.

Invention, a London scientific journal, says it has been discovered that the kola nut has the power to restore to normal condition the worst sufferer from intoxication or monomania.

ON TOP OF YOUR DINNER, one of DR. D. JAYNE'S SMALL, SUGAR COATED SANATIVE PILLS (non-nauseating and painless), will assist digestion, stimulate the Liver and regulate the bowels. Always safe.

MAPLE trees have been set out at various points through the South, and if it is found the sap will run well, groves of them will be planted instead of orange groves wherever possible.

BETWEEN 30,000,000 and 40,000,000 gallons of wine will be made in the United States this year of which California will produce more than half. Seven eighths of the grapes of California go to the wine-press.

A NUMBER of years ago a lot of swine were turned loose from a ranch at Lerdo, in Lower California, and they have increased so enormously that herds of 3,000 are not uncommonly seen on the plains.

MRS. HENRY WARD BEECHER is a charming old lady, with snow-white hair and pink cheeks. She dresses in black; the only bit of color about her attire is the pink or blue ribbon which adorns her lace cap.

If a calculation or estimate could be made of the amount of filth that is added to the milk of all the cows in this country, in one year, by not keeping the cows clean and using water on the hands before milking, it would pile up by tons.

We will mail free to any address, a copy of our Home Treatment, a positive cure for Leucorrhea, Whites and all Female Weakness. Send self-addressed, stamped envelope. May Flower Med. Co., 85 Lake St., Chicago.

As a delicate attention to bereaved families who reside in hotels and boarding houses, a San Francisco man has fitted up a large and handsome mourning saloon, where funerals may be held. All the employees are attired in black and wear black silk hats.

BEECHAM'S PILLS act like magic on a Weak Stomach.

The street railways of Paris are under the government control, and the rules for their guidance are very strict. Only four passengers are allowed to stand on the back platform, and they must pay the same fare as the first-class passengers inside (six cents), while those on the roof of the car ride at half rates.

MRS. HENRY DRAPER, now in Peru, is her husband's constant assistant in all his astronomical researches. She spends much of her time among the telescopes and photographic apparatus of the observatory.

ACCORDING to the new census statistics of the vine industry, there are 400,000 acres devoted to vineyards, of which 300,000 are in bearing. Of the area of bearing vines in the country California alone has 150,000.

A GUN 30½ feet long, weighing 31 tons, firing a 500-pound projectile with 240 pounds of powder, has reached the Brooklyn navy yard. The projectile will go through 40 inches of wrought iron and wrought steel at a distance of one mile.

PURE cream brings a higher price than skimmed milk; yet the skimmed milk is the more valuable as food, it containing all the nitrogen and mineral matter, the cream containing the heat-producing element—carbon.

SOMEONE threw a head of cabbage at an Irish orator while he was making a speech. He paused a second and said: "Gentlemen, I only asked for your ears; I don't care for your heads!" He was not bothered any more during the remainder of his speech.

MISS JULIA WARD HOWE, who is still a beautiful woman, with finely-modeled features, trained voice and gracious manners, as a poet and prose writer, a philanthropist and grande dame of society, has the unique honor of having been president of the Boston Woman's club for twenty years by the unanimous choice of the members.

A MANUFACTURER of ancient Egyptian mummies has been severely sentenced by the courts of Alexandria. He made his articles with carefully prepared asses' skins, and had a good trade. Everything went well so long as he made kings only, but when he tried the production of high priests he committed archaeological errors that led to his detection.

DESPITE their subjugation to British rule, the princes of India are still able to indulge in royal whims and extravagances. One of them recently had made at Paris a bed worth \$25,000. Its canopy is supported by four automatic female figures that wave fans to cool the air. The mattress is a huge musical box which, when one lies upon it, plays operatic airs.

IS IT not about time we ceased to apply to woman that misnomer of the weaker sex, at least so far as their ability to take care of themselves is concerned? In Germany 5,500,000 women earn their living by industrial pursuits; in England, 4,000,000; in France, 3,750,000; in Austro-Hungary about the same, and in this country, including all occupations, over 2,700,000.

FROM Bergen, Norway, comes the news of a practical charity, contemplating relief to a deserving class which, however, in our changing domestic conditions does not make so ready a call upon our sympathies as in older lands. Mrs. C. Soudt has given two houses and 50,000 kr. to establish a home for aged women servants no longer able to work for their own support.

A RESIDENT of Auburn, N. Y., has a hat in his possession which is over 150 years old. "The hat my father wore," "Grandfather's hat" and "Where did you get that hat?" aren't a circumstance compared with this ancient tile. It is a beaver, with genuine bell top, and was made in New York City. A bit of silk facings is on the top and bottom of the rim. This was to allow the raising of the hat without ruffling the fur.

THE six new female factory inspectors who have been added to the six male inspectors employed by New York state, will probably find plenty of opportunities for doing service in the enforcement of the factory laws. In that state there are nearly 30,000 factories of all kinds, about 11,000 of which are in New York City. The statistics show that fully three fifths of all the workers in them are women and children.

MRS. POTTER PALMER, of Chicago, president of the lady managers of the World's Fair, is not only a beautiful woman, like her sister, Mrs. Fred Grant, but an accomplished one as well, who knows Europe as well as her own country, has made her sumptuous house an art museum of pictures, statuary, bronzes, tapestries and curios, and who presides at all the committee meetings of the fair as if Robert's Manual had been her first primer and favorite story-book.

FROM 12 to 16 per cent of sugar can be obtained from beets, and as much as 4,000 pounds of sugar from an acre of beets may be obtained, but much depends on the amount of beets grown and the kind of fertilizer used. The farmers receive about \$3 per ton, or about \$50 per acre for the beets, according to quality. Sugar does not deprive the soil of any of its fertilizing elements, and hence, when the beet pulp is fed to stock, the nitrogenous and mineral elements are returned to the soil.

IN 1890 the foreign importation of prunes amounted to 58,000,000 pounds, a trifle heavier than in 1885, while in 1887 the shipments from abroad reached a total of 92,000,000 pounds. California produced, in 1887, 1,800,000 pounds, against 12,000,000 for 1890. The foreign importation of figs has increased steadily for the past three years, and the annual shipments amount to about 10,000,000 pounds. In California this production has increased from 90,000 pounds in 1887 to 200,000 in 1890.

MRS. COOPER OAKLEY, the fashionable London milliner, known to her customers as "Madame Isabel," has established a thriving restaurant for women in Mortimer street, where they may obtain an excellent mid-day meal of meat, with two vegetables, for about sixteen cents. These luncheons are well cooked and daintily served, and the success of the enterprise has already led to the institution of others on the same economical plan.

FRAU SOPHIE SALVANIUS has written a treatise making a forcible appeal to German women to resist the tendency of woman's education, to treat girls exclusively as future housekeepers and mothers. The writer argues that this is an injustice, since no one thinks of educating boys simply to be future householders and fathers. She insists that the modern system of educating women results in cramping women's individuality and in lowering the ideals of life.

NOT all society girls eat the bread of idleness. Miss Mildred Conway, only daughter of that favorite author, Moncure D. Conway, assists her father in his literary work, plays the piano like a professional performer, has so much dramatic ability as to have procured her good offers from the theatrical managers, and is one of the most faithful and zealous workers in the successful "College Settlement" in Irvington street, while, in addition to her gift to cleverness, her fairy godmother gave her a gypsy-like beauty and a charming voice.

RAIN ARTIFICIALLY PRODUCED.

Important investigations are now being made by the Department of Agriculture on the subject of the artificial production of rainfall. With regard to this subject, Colonel Casper, of the Signal Service, says:

"No doubt there is plenty of moisture in the atmosphere at all times, if it could only be gathered in the right place and be made to fall upon the earth. Man has accomplished as difficult things as that in the realms of science. It is not contemplated to produce growth of forests in the arid regions. The success of that method is still disputed. It is proposed to find out whether rainfall cannot be produced by electricity, dynamite explosions or other mechanical agencies. Taking the cue from the fact that heavy cannonading on a battlefield or on a Fourth of July celebration is followed by copious rains, the experimenters will work accordingly.

"The process of burning powder to produce rain has hitherto been too expensive to warrant its general use; but possibly cheaper explosives will be found. It has been proposed, among other things, to attach twenty-five pounds of dynamite to a toy balloon, and then send a flock of such balloons into the air with lighted fuses attached. In some way or other there is no doubt that the arid portions of the country will soon be brought under splendid cultivation. They comprise some of the most fertile spots on the earth."

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GOOD WORDS.

GREENVILLE, ALA., May 3, 1891.

I received your Dictionary and Peerless Atlas, and am highly pleased with both of them. You will please accept my thanks for them.

W. A. GRAYDON.

WEST JORDAN, UTAH, March 16, 1891.

You will accept my thanks for the Peerless Atlas. It far surpasses my anticipations. I am greatly pleased with it, and think as you, that it should be in every library and home. The maps are excellent and the descriptions to the point. I have read it with interest since it came.

JEDEDIAH GOFF.

SUSPENSION BRIDGE, N. Y., April 23, 1891.

I received the picture, the books and the needles. I am very much pleased with all. Accept my heartfelt thanks for them. In return I will try and get some subscribers for your paper.

LOTTIE HOELIN.

EBBITT HOUSE, WASHINGTON, D. C.,

April 24, 1891.

I received the Peerless Atlas to-day. I am not surprised that the copies have been so rapidly disposed of. My only regret is that I did not order a bound copy. It is excellent and useful. I am surprised to see so much work for such a small amount of money.

MRS. BEN PERLEY POORE.

GRAND RAPIDS, MICH., May 4, 1891.

The picture, "Christ on Calvary," was duly received some time ago. Please accept my heartfelt thanks. I think it is splendid, and would not part with it for \$10 if I could not get another. Mrs. Keck has also received her picture, "Christ Before Pilate," and she thinks it is a gem.

MRS. E. E. CARLSTEDT.

JACKSONVILLE, FLA., April 20, 1891.

The Cook Book arrived, and is highly praised by all who see it. Many thanks.

JAMES F. SMITH.

ST GEORGE, MD., May 1, 1891.

Atlas arrived safe. Thanks. It is far in excess of my expectations. You are certainly liberal.

F. X. JENKINS.

WALSEY, S. D., April 15, 1891.

I received the Atlas, needles and Cook Book all right. I am well pleased. You give more than you promise. I will try to get some subscribers for your paper.

H. LUCHSINGER.

HINSDALE, MASS., April 20, 1891.

I received the picture, "Christ on Calvary," and think it just grand. I have a nice pair now, as I received "Christ Before Pilate" last year. Many thanks.

MRS. J. HONIKER.

NEWTON, KAN., April 23, 1891.

I received the Peerless Atlas some four weeks ago, in good shape, for which please accept thanks. I have examined it thoroughly and find it to be a very valuable book, which I am sure is worth **more than \$10.00** to any one who is seeking after intelligence. Any one missing that book is missing a rare chance and a cheap offer.

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RICHER THAN THE CALIFORNIA GOLD FIELDS.

ONE NUGGET of Pure Gold weighing Eleven (11) Pounds, value \$3,520, recently picked up in this region (See N. Y. Financial and Mining Record). A DIAMOND from this section now owned by Col. HENRY DEMING, of Harrisburg, Pa., worth \$2,500.

MILLIONS IN GOLD AND GEMS!

Every Claim Holder stands the chance of making just such marvelous finds. **Forty Thousand Dollars in Gold** was taken in five months from the edge of a piece of swamp land. (See N. Y. Sun, Sunday, June 7th, 1891.)

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Smiles.

IDYL OF A HORSE-CAR.

Ram 'em in,
Jam 'em in,
Push 'em in, pack;
Hustle 'em,
Justle 'em,
Poke in the back.

Tramp on 'em,
Stamp on 'em,
Make the bones crack,
Fat women.
Slat women,
Tom, Dick and Jack.

Hang on,
Cling on,
By teeth or by hair,
Ah, there!
Now stay here,
And pass up your fare.

—Chicago Herald.

THE TOMATO-CAN.

A small goat ate a tomato-can
And then eight pounds of nails,
He finished his meal, by way of dessert,
By consuming four large fence rails.
He said to himself, with a jovial smile,
As off to his home he ran:
"I'm sure the nails can't disturb me,
But I think the tomato can."

—Yale Record.

"DARN A FLY."

The fly has some advantages over a man. For instance, he has a pair of double, compound eyes, and with them he can see in any direction or in all directions at once without for an instant turning his head. These eyes have four thousand distinct facets, and all of them have direct communication with the brain, so that if a man comes along on one side of him and a lump of sugar on the other, he will be able to watch both of them and stay for the sugar so long as it is safe on account of the man. When he sees he can get one and dodge the other, that is exactly what he does, and he does not have to twist his neck in two trying to keep track of the opposite object.

The fly is particular about the air he breathes. He hasn't a very big mouth, and his lungs are small in proportion to his body, but he is particular what he puts into them. He has provided himself with a minute screen which has been stretched across his throat, and through this he strains the air before inhaling it, and so preserves his precious life to the very limit of longevity. A rupture to this screen would be fatal to the fly. Good green tea, such as the best of the grocers sell for one dollar, steeped pretty strong and well sweetened, will kill as many flies as drink of it, and they will drink it as readily as a coon will play craps. It is estimated that one pound of tea and two pounds of sugar will rid a room of flies within ten days—that is, a small room.

Flies are voracious eaters. They do not care so much what they eat as when they eat it. They are particular about regular meals. They do not eat long at a time, nor much at a time, but they eat often. Careful observers have stated that a common house-fly will eat forty-two thousand two hundred square meals in twelve hours. One female fly will produce twenty thousand young ones in a single day, and they will develop so rapidly as to increase two hundred fold in weight in twenty-four hours.

Scientists have never been able to tell how a fly walks on the ceiling, or, rather, they have never been able to agree about it. All of them have told, but no two are alike in their explanation. Some say the fly has an air-pump in each of its numerous feet, and that he walks up there by creating a vacuum in his instep and allowing the pressure of the air to sustain him. Others think he carries a minute bottle of mucilage around with him and lubricates his hoofs with it, so that he can stay as long as he wants to on any surface, no matter what the attraction of gravity may have to say about it. Between these two schools of thought you may take your choice.

—Chicago Herald.

BENEFICIAL EXERCISE.

Mr. Pinkie (10 P. M.)—"My dear, the doctor says a brisk walk before going to bed will insure sleep to insomnia sufferers like myself."

Mrs. Pinkie—"Well, my dear, I will clear the room so you can walk. Please carry the baby with you."—New York Weekly.

A FAR-SIGHTED YOUTH.

"Can you afford to marry?"
"I think so. I have a clergyman friend who'll do it cheap."—The Epoch.

BE CAREFUL.

A woman once consulted a seer regarding a way to retain the affection of her husband, and this was the advice received. "Get a raw piece of best sirloin steak, about half an inch thick. Rub with a central slice from a wild onion, salt and pepper. Toast over a bright coal fire on a gridiron which is handled only by yourself, never by your servants; then put a little sweet butter over the beef. Give him half a pound of this each morning, and do not speak while he eats it."

LITTLE BITS.

In Boston men are beginning to emancipate themselves from the gentler sex. A man has started a millinery store.—Texas Sistings.

When you say a man has a clear field you mean that he has nothing in it. It is different, however, when you say he has a clear head.—Yonkers Statesman.

Sunday-school teacher—"Now, Johnnie, tell me what took all the snap out of Sampson." Johnnie—"A home-made hair-cut, ma'am."—Yonkers Statesman.

A Maine girl, fifteen years old, is said to make twenty-five coats a week, take a music lesson, practice two hours a day and saw all the wood for two fires.

"I don't think much of Mrs. Bronson," said Mrs. Smiffles. "I spent the afternoon with her, and such a woman for listening to scandal I never knew."—New York Herald.

"Shooter must be a fool. You say he offered Banger \$1,000 for his bird dog?"

"Yes, but Banger was a bigger fool. He wouldn't take it."—Cleveland Plain Dealer.

Black—"So you've been abroad. How did you like Ireland?"

White—"Oh, you wouldn't know it from some parts of America."—Harvard Lampoon.

Weary husband (Sunday morning)—"How long has that confounded bell been ringing?" Wife—"Since six."

Husband—"Well, I guess I'll go to church this morning and see if I can't get a little sleep."

"But, doctor, you said, you know, that I must avoid all excitement."

"Certainly; it hurts you. I have always told you so."

"Why, then, did you send me your bill yesterday?"—Fliegende Blatter.

"One thing I like about our new man," said a member of the firm to his partner, "is that he is reliable. You can always tell what he is going to do next."

"And what is that?"

"Nothing."—Washington Post.

"How did the young woman you wrote the poem for like it?" asked one of his friends of Willie Washington.

"She didn't say anything," said Willie, "except that I ought to send it to a chiropodist and have its feet attended to."—Washington Post.

The fellow who, just before the race, knows exactly how it is coming out, looks so much like the fellow who, just after the race, borrows a quarter to pay his bus fare to town, that you would think they were twin brothers if you did not know better.—Detroit Free Press.

Mrs. Fatwood—"I cannot allow you to light the fire with kerosene."

Biddy—"Sure, an' I always used it at my last place."

Mrs. Fatwood—"And did you never get blown up?"

Biddy—"Yis, mum; most every day—by the missus, mum."

"Don't you think it is time for Miranda to learn to play on some musical instrument, Edward?" asked Mrs. Sharp of her husband, as the notes of their daughter's voice floated in from an adjoining room. "Yes," replied Edward, with conviction, "I do; but it should be some loud instrument to drown her voice."—Louisville Journal.

The Smith family is numerous in Grand Rapids. One Smith owns a store. Two others by that name were arrested for robbing the first Smith, and there was a Judge Smith in the case. The whole thing was made complete by the two Smiths breaking into a blacksmith's shop to get the tools to rob Smith's store.

Snodgrass—"Did you hear of Mrs. Snively's narrow escape?"

Judson—"No, what was it?"

Snodgrass—"Yesterday morning she had resolved to throw herself into the river, after a quarrel with her husband, but she had only gone a few yards from the house when it began to rain so she turned back at once for fear of getting her clothes wet."—West Shore.

An Austin man started in the livery stable business last week, and the first thing he did was to have a sign painted representing himself holding a mule by the bridle.

"Is that a good likeness of me?" he asked of an admiring friend.

"Yes, it is a perfect picture of you; but who is that fellow holding you by the bridle?"—Texas Sistings.

J. G. Thompson has received a patent for his automatic milker. An eccentric, three inches in diameter, is attached to a cow's jaw. From this leads a wire connecting with elastic nipples on the udder, each of which is fitted with a valve, making it an air-pump when in motion. When the cow chews her cud the eccentric revolves and the wire is worked back and forth like a piston, creating suction in the nipples. The milk, as it is drawn, runs into a bucket suspended below. The invention will relieve the dairyman of much labor.—Homer Index.

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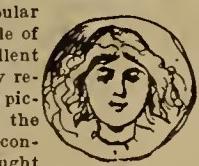


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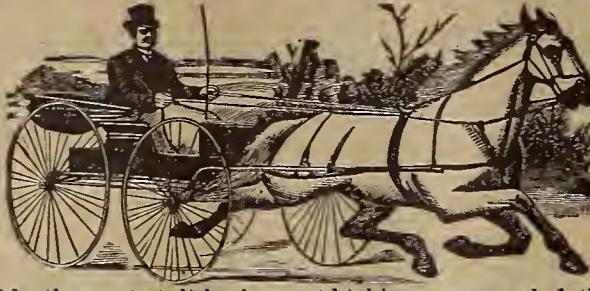
Alas! those chimes.	Dear heart.
Annie Laurie.	Happy new year.
Arkansass traveller.	De hanjo am.
Auld lang syne.	Devil's dream.
Basket of loves.	Drunken sailor.
Battle prayer.	Durang's hornpipe.
Bean of Oak Hill.	Eight-hand reel.
Beans of Albany.	Erminie gavotte.
Beautiful castle.	Erminie lullaby.
Belle Canadienne.	Erminie's heart.
Bougie blue flag.	Fairy dance.
Bonnie Doon.	Fairy varsoviana.
Boston dip waltzes.	Favorite dance.
Boozie, La.	Fireman's dance.
Cachet La.	First love redowes.
Chained to last.	Fond-hand reel.
Chin-ses march.	Fritz's lullaby.
Chorns jig.	Goddard de Vestrie.
College hornpipe.	German redowa.
Comin' thro' the rye.	German waltz.
Coquette.	Girl I left behind.
Cuckoo, The.	Go to the D—.
Barney of Killaree.	Dashing white sergeant.
Blue bells of Scotland.	Dick Sand's hornpipe.
Campbells are coming.	Don't drink, to-night.
Campotown hornpipe.	Douglas's hornpipe.
Can you keep a secret?	Electric light galop.
Carillon du Dunkerque.	Fisher's hornpipe.
Charley over the water.	Flowers of Edinboro'.
Cincinnati hornpipe.	Flowers of Edinburgh.
Constitution hornpipe.	Fri Diavolo quickstep.
Crickets on the hearth.	Fred Wilson's clog.
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For any article on this page, address letters to	Hey, daddy.
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	Home, sweet home.
	Hull's victory.
	Imperial, L'.
	Irishman's heart.
	Jakie's hornpipe.
	Jesus, lover of my.
	John Anderson.
	Jordan is a hard.
	Keelie.
	Keep the horeshoe.
	Kennall's hornpipe.
	Kitty O'Neill's jig.
	Ladies' triumph.
	Lady of the lake.
	Lancashire clog.
	Land of sweet Erin.
	Larry O'gaff.
	Lapse.
	Light for the tongue.
	Light in the window.
	Haste to the wedding.
	Maid in pump-room.
	In time of apple blossoms.
	Irish washerwoman.
	Mianie Foster's clog.
	Newport or Narragans't.
	Jolly dancers medley.
	Oh, you little darling.
	Pop goes the weasel.
	Shuster's hornpipe.
	Sir Roger de Coverly.
	Lamplighter's hornpipe.
	Silence.
	Six-hand reel.
	Smash the window.
	Smith's hornpipe.
	Polly wolly doodle.
	Portland fancy.
	Prince or peasant.
	Quitting party.
	Ricket's hornpipe.
	Robin Buff.
	Minuet.
	Miss McLeod's reel.
	Money Musk.
	Irish trot.
	Father's reel.
	Jackie's reel.
	Now, was I wrong?
	John.
	Old oaken bucket.
	Old robin.
	Old zip coon.
	Oily.
	On the banks.
	St. Patrick's day.
	Opera reel.
	Shells of ocean.
	Sicilienne, The.
	Over the water.
	Oyster river.
	Silent night.
	Six-hand reel.
	Zulma.
	Petronella.
	Light artillery.
	Liverpool hornpipe.
	Lord's my shepherd.
	Madrasine, La.
	Mary of Argyle.
	Minuet.
	Miss McLeod's reel.
	Money Musk.
	Mother's song.
	My pretty pearl.
	Now, was I wrong?
	Oh, carry me back.
	Old rock-a-bye.
	Old robin.
	Old zip coon.
	Oily.
	On the banks.
	St. Patrick's day.
	Opera reel.
	Shells of ocean.
	Sicilienne, The.
	Over the water.
	Oyster river.
	Silent night.
	Six-hand reel.
	Zulma.
	Polly wolly doodle.
	Portland fancy.
	Prince or peasant.
	Quitting party.
	Ricket's hornpipe.
	Robin Buff.
	Rocket galop.
	Rory O'More.
	Rosebud reel.
	Rustic reel.
	Red iron hornpipe.
	Rock of ages.
	Rossie, La.
	Royal arch.
	Old zip coon.
	Sailors act on shore.
	St. Patrick's day.
	Scotsish dance.
	Sheila of the Glen.
	Sicilienne.
	Sicilian circle.
	Silent night.
	Six-hand reel.
	Zulma.
	Polly wolly doodle.
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	St. Patrick's day.
	Scotsish dance.
	Sheila of the Glen.

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EASTERN EDITION.

VOL. XIV. NO. 21.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, AUGUST 1, 1891.

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Journal in the World.

Current Comment.

THE editor of the Cincinnati Price
Current, who is recognized as a high
authority, has the following to say
on the "World's Wheat Situation:"

As a rule, the tendency of observers is to
overestimate the extent of an apparent devia-
tion from the average or usual condition of a
crop. This becomes a factor in calculations
where there is a deficiency, as well as where
there is an excess.

In European countries, France is by far the
most conspicuous in the production of wheat,
and also takes first rank in the consumption
of this cereal, the United Kingdom being
second. The latter country, however, is the
more important in its bearing upon the ques-
tion of values, for its requirements are so
largely obtained from other countries. Ordin-
arily, the annual importations of the United
Kingdom are equal to or exceed the total of
all the other European importations of wheat.

The average annual production and con-
sumption of wheat of the different countries
of the world generally recognized in commer-
cial statistics, aggregate about 2,100,000,000
bushels, of which Europe consumes about two
thirds, and produces about 60 per cent.

The wheat crop in France, chiefly autumn-
sown, as a rule, was so seriously impaired by
the severity of winter conditions as to awaken
apprehensions early in the season as to the
extent of the injury. Considerable reparation
to the crop was accomplished by spring
sowings, but it is authoritatively stated that a
very considerable area was abandoned to other
crops. These conditions, with more or less
impairment in the wheat crops in other conti-
nental countries, have been influential in
speculative operations, and there is ground for
the view that the extent of curtailment in
the season's production has been somewhat
exaggerated.

A careful review of available information
in regard to prospects of wheat production in
Europe this season, leads to the conclusion
that approximately 1,115,000,000 bushels may
be expected, as compared with 1,275,000,000
bushels last year, when the total was some-
what in excess of the average of good and poor
years, the indications for this year being for a
quantity about equal to the European produc-
tion in 1888.

This approximation implies a reduction of
160,000,000 bushels of wheat this year in the
European production in comparison with last
year, and 330,000,000, or 23 per cent, below the
aggregate of the largest crops of each of these
countries during the past seven years, which
logically suggests that the present crop repre-
sents about 75 per cent of a full condition, con-
sidered in its entirety, for Europe, and about
12 per cent below the average of good and bad
years, which is about 1,250,000,000 bushels.

Turning to other resources for wheat, the
indications for India, Algeria, Egypt, Austral-
asia and South America, point to an aggre-
gate of about 355,000,000 bushels—a quantity
slightly in excess of estimates for 1890, and
compared with 360,000,000 as the annual average
of good and bad crops during the past seven
years.

In the United States, 525,000,000 is a fair
estimate for present calculations, and for
Canada 40,000,000 represents quite fully the
probabilities of the season, implying a total of
565,000,000 for North America.

Tallying the totals for Europe, the group
of countries representing India, Algeria,
Egypt, Australasia and South America, and
the United States and Canada as North
America, the following comparisons are
reached:

Yr.	Europe.	India, etc	N. Am'ca	Total.
1891	1,115,000,000	355,000,000	565,000,000	2,035,000,000
1890	1,275,000,000	347,000,000	437,000,000	2,059,000,000
1889	1,119,000,000	324,000,000	522,000,000	1,965,000,000
1888	1,229,000,000	369,000,000	446,000,000	2,044,000,000
1887	1,305,000,000	332,000,000	490,000,000	2,127,000,000
1886	1,192,000,000	404,000,000	494,000,000	2,090,000,000
1885	1,217,000,000	357,000,000	395,000,000	1,999,000,000
1884	1,270,000,000	362,000,000	552,000,000	2,184,000,000

The logical deduction from this exhibit is
that the world's wheat production in 1891 will
be about 3 per cent below the ordinary annual
consumption, if present indications for
European and American crops are maintained,
or about 65,000,000 bushels.

Aside from this moderate deficiency in
wheat, is the fact that rye, which is of great
importance in Russia, and very considerably
so in other continental countries, is under-
stood to be quite decidedly short of the usual
production this season.

A further feature, calculated to be a strength-
ening factor in calculations as to future prices,
is the recognized low condition of wheat re-
serves everywhere; so that the new crop, not
only in this country, but elsewhere, will more
early than ordinarily begin to respond to the
demands for consumption.

The United States will by far be the most
important wheat-exporting country this year;
and if speculative operations do not too
seriously interfere with a free and steady
movement of the surplus as it is called for by
the importing countries, it should be expected
that the average of prices will be even better
than for the past year, which shows a marked
improvement over any previous year for quite
a period—covering the years back to 1882-83.

The influence of price on consumption of
wheat cannot be determined or reliably calcu-
lated. In such countries as France, where the
production is great, and the entire crop and
more is used at home, it does not follow that
all the deficiency in the home supply as com-
pared with ordinary years will be made good
by importations. The consumers of wheat
more widely represent the producers in France
than in this and other countries; and where
these growers of wheat, on comparatively
small areas, are confronted with a deficiency
in this cereal, they will naturally adapt them-
selves to the changed conditions and satisfy
themselves with such products as are obtained
from the lands under their culture. This also
applies to Germany, with perhaps but little
less force. So that in taking a survey of the
general situation for the future, the influence
of such factors should not be overlooked.

On the basis of a crop of 525,000,000 bushels in
the United States, there will be an excess of
about 165,000,000 bushels of wheat over the
home requirements for consumption and seed-
ing, which will be approximately 360,000,000
bushels for the coming year. The average
annual exports during the past ten years have
been 120,000,000 bushels. For the two years
next previous to this period the exports were
larger than since then or previously, having
been 180,000,000 bushels in 1879-80, and 186,000,000
in 1880-81.

HERE are indications that the sub-
treasury scheme will cause a split
of the Alliance in the South. An
Alliance convention, held last month at
Fort Worth, Texas, adopted the following
resolution:

"We denounce the sub-treasury and
land-loan schemes and governmental
ownership of railroads as a violation of
the first principles of good government,
as paternal in their character, as centraliz-
ing in their tendencies, and if enacted

into law they would create such a horde
of national officeholders as would fasten
the clutches of the party in power upon
the throats of the people so strongly that
the voices of the honest, patriotic citizens
would no longer be heard in the control of
government affairs. We demand that
these men who are not farmers, be re-
moved from national and state offices of
our order, and that none but those who
have their interest in farming be allowed
to fill such places. We now appeal to all
honest members of the Alliance through-
out the United States to unite with us in
putting down this common enemy and
disgrace of our order. To this end we
most earnestly recommend the brother
Alliance men of the United States to meet
in national convention at St. Louis on the
third Tuesday of September, 1891."

Here we have in Texas, the birthplace
of the Alliance, a serious revolt against
the schemes and doctrines that have been
grafted on the original Alliance platform.
This revolt is not confined to that state,
but is going on all through the South, and
is gaining strength every week. The facts is,
the people there have never unanimously
indorsed these schemes, and they are
making their opposition known. Except-
ing in some parts of the West, they have
never been received with favor in the
North. Hence, from the outspoken oppo-
sition we now hear from Mississipi, it is
clear that the beginning of the end of the
wild schemes is in sight.

THE following special communication
has been received from the Ohio Ex-
periment Station:

"The wheat-midge, popularly known as
"red weevil," has appeared this year in
injurious numbers at the experiment
station. In 1852 to 1857 this insect did an
immense amount of damage in Ohio,
Indiana and New York, its work culminat-
ing in Ohio in the almost complete de-
struction of the crop in the northern and
eastern counties in 1854, the total loss to
the state from this insect in this one year
being not less than eight million bushels.
In 1860 to 1866 it was also prevalent in
various parts of the state, although no
such widespread destruction was accom-
plished as in 1854. Judging from its past
history, there is danger of another de-
structive outbreak, and in view of this
danger the entomologist of the experiment
station desires that farmers everywhere
who may have noticed this insect in their
wheat should write to the station stating
the amount of injury done, the varieties
of wheat most affected, and giving any
observations they may have made con-
cerning its habits. Address Entomologist,
Experiment Station, Columbus, Ohio."

THE proposed taxation amendment
to the constitution of Ohio, to be
voted on next fall, should receive
the earnest support of every one in favor
of tax reform. Our present system is in
need of radical reform. There is much
in it that is unjust and unfair. There is
taxation on debts, double taxation and,
for some, escape from taxation. There is
not only unequal undervaluation of prop-
erty, but personal property to the amount
of many millions is fraudulently withheld
from taxation.

If the proposed amendment is adopted,
the general assembly will have power to
make many needed changes and improve-
ments.

Franchises can be taxed and made to
yield to the state a revenue of over
\$3,000,000. The taxes on real estate can be
lowered, and personal property and cor-
porations be made to pay their fair
share.

There is much discontent in this state
about taxes, owing to the inequalities
growing out of the present system. No
American citizen with a spark of true
patriotism in him should object to paying
his just share of the taxes necessary for
good government. On the other hand, he
is not a true American citizen if he does
not rebel against and overthrow a system
that imposes unequal taxes.

Vote for the taxation amendment. It
is not a party measure. Also vote for
members of the legislature who will
make for us fair and just laws.

The farmers of the state are the ones
most vitally interested in this reform
measure. The burdens of taxation have
been thrown on their shoulders, and they
are carrying much more than their share.
Now is their opportunity to do something
that will result in equal taxation. Two
years ago the amendment was lost by
default.

Don't lose the opportunity this time.

THE June report of the Kansas State
Board of Agriculture estimates the
present wheat crop of that state at
55,000,000 bushels, the largest in
her history. This bountiful crop will enable
Kansas farmers to lift a part of the farm
mortgage indebtedness so greatly magnified
by the calamity prophets. Bountiful as
this crop is, it does not come up to the
expectations raised by conditions earlier
in the season. As the result of a special
inquiry into the causes of the falling off
of 20 per cent in prospective yield, the
secretary of the board places poor farming
first.

The sooner Kansas farmers realize that
no new-fangled system of finance, how-
ever alluring, that no political revolution
will make up the losses of poor farming,
the better off they will be.

IN the earlier period of our history,
immigration scattered over the land
and soon became Americanized. The
second generation showed few traces of
foreign ancestry. At the present time
much of the immigration colonizes and
remains foreign. The children go to
schools from which the English language
has been driven, use foreign text-books
and are taught by foreign teachers. This
is un-American, and opposed to the spirit
of all our institutions. Every such
colony, whether in the great cities or in
agricultural communities, is a head center
of opposition to our free institutions. If
immigrants do not want to become
Americans, let them return to their native
land.

A CANVASS made by the New England
Homestead shows that very few
farmers of New England and New
York indorse the new People's party.
While many favor independent political
action, when necessary to guard the inter-
ests of agriculture, not more than one or
two per cent favor the idea of a special
farmers' political party. The sub-treasury
and land-loan measures are considered
wild schemes, and even the free coinage
of silver has but a small following among
them.

FARM AND FIRESIDE.

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Philadelphia, Pa., or Springfield, Ohio.

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Our Farm.

MANURE SHEDS.

AE believe that much of the waste of stable manure is due to the fact that it is hard to abandon methods practiced from time immemorial and adopt new ones which are more difficult, because they are unfamiliar.

Then, too, many feel that the expense of fitting up suitable receptacles for the temporary storage of manures, when, from various causes, it is not convenient to transport them direct from stable to field, is too great. Most farmers have had little experience in planning and erecting buildings, and they naturally think that they have not built much after the fashion of those constructed by our grandfathers, when timber was worthless and carpenter work comparatively cheap. The new idea that the manures should be as carefully preserved from unnecessary waste as any other product of the farm is hard to put in practice after having stored for forty years the farm-yard manures under the eaves, upon the steep hillside which forms one border of the running brook.

The accompanying figures, 1, 2 and 3, show the ground plan and elevation of the frame of a cheap, durable and easily-constructed covered yard. Long posts or

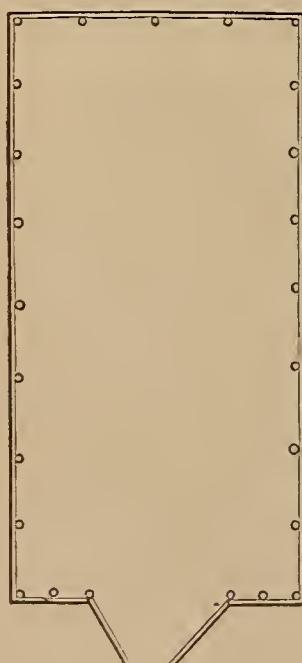


FIG. 1.

poles, eight inches in diameter at the butt, are set in the ground two feet deep and six feet apart. Upon these are spiked two-by-four scantling, about four feet apart, for nailing girts, and a plate two by six is nailed on top of the posts, which have been previously sawed off to a line after the girts have been spiked to them. Round poles, flattened at the ends, or two-

by-six joists doubled, spiked to the heads of the posts, will tie the building together. Ten feet will be quite high enough for the story, and one story will suffice if no straw is to be stored above except that which is placed there to exclude the cold. A few poles or old rails laid on these cross-ties which bind the building together, will suffice to sustain the weight of the straw, while the straw will exclude the cold and absorb the moisture far better than an expensive matched ceiling.

On the inside of the posts which have been set in the ground, flattened poles, rails or slabs or cheap boards may be nailed horizontally, and the space between the outside vertical boarding and the inside horizontal boarding may be filled with straw. This kind of a wall is far drier and more comfortable for the animals than one made of costly stone or brick.

If it is desired to have a place to store straw, the building should be higher, the joists stronger and more numerous than in the one-story building, and they will all have to be supported by a timber supported by posts placed under their centers. The roof should be steep, and can be made of any material which will shed water. When the posts which have been set in the ground have rotted off, or are much decayed, they may be sawed off even with the ground and supported by placing underneath each one of them a large, flat stone. Whenever the building is treated in that way it will be necessary to brace it thoroughly. It might be well in a windy country to brace so wide a building at the start.

Such a building will be inexpensive and reasonably durable. It will serve as a place for depositing manure when needed; it will shelter the animals while they are being watered and the stables are being cleaned and aired, and give facilities for preventing loss of valuable fertilizing material either by leaching or firing. Many stables are situated something similar to what is shown in Fig. 4; by adding a cheap leanto, as shown, a receptacle for caring for the manure is easily provided. The outside boarding of the leanto should be, for a part of the way, at least, put on horizontally and hung in the form of flat doors, so that the manure can be easily loaded on a wagon standing on the outside of the building.—*Bulletin of Cornell University Experiment Station*.

HYBRIDITY—WHAT THE RESULTING FRUIT MAY OR MAY NOT BE LIKE.

This is a point that no one knows much about as yet. But it is of great value to the experimenter to have some of the few facts that have been learned.

It is natural, and generally thought that a hybrid between two species should be intermediate in characteristics between the two or more parent species; yet this is far from being true in all cases, and it leads to mistakes. It is true, generally, that the hybrid offspring between two species are intermediate in all particulars. Yet there may be true hybrids that resemble either parent so closely as to not show even the slightest specific difference. Seedlings from such hybrids show no signs of hybridity, while in the second, third or fourth generation from seed they may, as the saying is, "go all to pieces," and show a full commingling of the marked characteristics of the two parent species.

Again, it seems to be true that some plants have both sexual sides so prepotent that other pollen than their own may pollinate them constantly with no effect whatever on the offspring. In other cases such pollination may crop out distinctly in offspring many generations removed. For instance, I should judge from observation and experiment that our common pear species is prepotent on the female side—so completely prepotent that when its stigmas receive and absorb apple, quince or crab pollen, and are pollinated thereby, and the seeds are planted and grow, and then fruit, the hybrid trees and fruit will be essentially pears, showing none of the characteristics of the male parents whatever. Therefore, it may not be possible to get a seeming hybrid between the pear and apple on this line, though, nevertheless, it may be possible if using the apple as the female parent and the pear as the male.

Another example of the same nature may be found in the common, bright,

orange-colored, field or Yankee pumpkin. Its order, the Cucurbitaceae, is noted for the facility with which its different species hybridize, the one with the other*; that is, the majority of them. Yet this pumpkin has been grown for a great length of time, intermingled in the garden and field with other species and varieties of pumpkins and squashes, and, so far as I have observed, it remains the same old true variety or species. If we plant seed from fruit grown on its own vine, its pollen "breaks up" nearly all other varieties within its reach; yet there may be species of its order that when brought near it will "break it all up."

That pollen of one species, when pollinating the stigmas of another species, may not show any effect on the progeny of the species pollinated until several generations have passed, is undoubtedly true, for we certainly find this true in cross-bred individuals between varieties of the same species. Darwin gives scores of such ex-

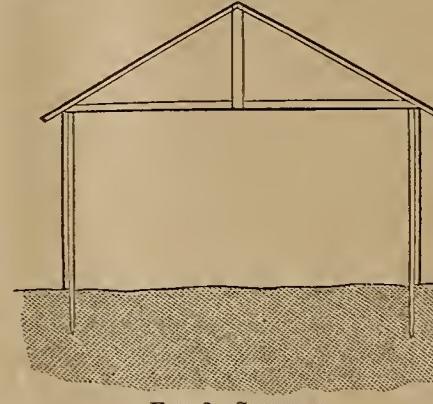


FIG. 2.—SECTION.

amples. Nearly all of our domesticated fruits show this—the myrobalan plum, for instance, which is largely used as a stock or root on which to work many other stone fruits. It is a native wild plum species of southern Europe, and has been grown from seed in a semi-domesticated state for its seed for ages. Its seedlings, as they are imported from France, any one can see range widely in their individual characteristics.

The expert in hybridity can see in a thousand of its seedlings good proof that they have in them the blood of every one of our cultivated stone fruits belonging to the almond family. And one of our great experts in hybridity firmly believes that he could plant any one of those thousand seedlings in an isolated place where it could receive no pollen but its own, and if it bore fruit, he could take a seed from any one of those fruits, plant it, and if it grew, that from its progeny, if he could live long enough, he could, in time, produce the counterparts of any or all of our now cultivated stone fruits belonging to that family. It might take him a thousand years or more, but he firmly believes he could do it and not use any other pollen in the work other than that produced by the plants under experiment. Or, he will agree to run his hand into a certain bag of what seems to be common garden beans, take therefrom a single bean and produce from it and its direct progeny the counterpart of any or all of our so very different garden beans.

We, in our short-sightedness, have come to look upon our species as stable and lasting—the same now that they were thousands of years ago. They are not, or the genera, orders and families are not; they are constantly changing, degrading or advancing.

A good lesson in the mutability of species and the power of hybridity may be seen in the so-called plums of Japan. The plums have been the pets and pride of this curious, ingenious people, from the remotest antiquity. Every curious point that skill or accident could give them has been preserved and fostered. The results as seen to-day in the different individuals that evidently are descendants of a plum species, are truly astonishing; and if a good, systematic botanist undertook to classify them into species it would be likely to send him to the mad-house.

Take, for instance, the plum now pretty well known as the Kelsey. In it we have the leaf of the peach growing on almond wood, with almond flowers; the fruit with the skin and shape of the apricot, the size of the peach, with the pulp of the cherry, the stone of the cherry and the kernel of the plum. The flavor of the pulp is hard to define; it seems to be a commingling of the flavor of the apricot, peach and plum. Where

would the botanist place such a tree if he found it growing wild? There are others of these plums still more interesting from a biological standpoint. Then what we may expect from hybrids between species is nearly anything we can imagine, if we have skill and time enough.

*Since writing the above I have read what "Joseph" has to say in answer to the question, "Do vines mix?" His experience has been that they will not. Mine has been the reverse, I having found it true in every case that terrestrial-growing vines will mix when planted near each other; even sweet potato and pumpkin vines mix amicably. But when it comes to mixing sexually, by means of their flowers or generative organs, that is another thing, and I cannot agree with either his conclusions or the seeming results of Prof. Bailey's experiments. These give simply present negative results.

The cucurbits are a large family, with many genera and species, some of them far apart, and it is not to be expected that hybrids can be readily obtained between all the species or any particular pair of them. Yet many of the species do readily hybridize, and the pollen of the resulting hybrids may be potent on and break up other species. I have certainly seen numerous hybrids between *C. pepo* and *C. maxima*, though, as Joseph intimates, right in the same field one can gather Hubbard seed that will grow true Hubbards, the Hubbard being so strongly free potent. Yet it would be hardly safe to its purity to continue planting it among the hybrids.

Again, Joseph intimates that the first progeny should show hybridity, which, in fact, should not be looked for, and is only seen in very few instances in crosses between varieties—maize, for instance, and then he admits that he would not expect to get good results from seed grown on plants of the cucurbits when grown so near together.

D. B. WIER.

SUGGESTIONS FROM STATION BULLETINS.

BY JOSEPH (TUSCO GREINER.)

POTATO BLIGHT AND ROT.—Bulletin No. 24, of the Vermont Station (W. W. Cooke, director, Burlington), treats on a timely topic, the diseases of the potato plant. With the potato-beetle now almost gone out of existence, so far as this locality, at least, is concerned, blight and rot are now chief obstacles to successful potato culture. The damage done by these diseases in recent years has been enormous, and reached its climax in 1890, reducing the crop to a mere fraction of what it should have been.

The present season does not seem to be a favorable one for the development of fungi. The foliage of trees, grapes, etc., which has suffered so much from this cause during the last few years, has thus far remained free from all signs of fungus growth, and I am in hopes will continue thus. Potatoes may also entirely escape the attack of fungi this year without any effort on our part. Still, it will not do to rely too confidently on such exemption, especially since it has become known that blight and rot can be prevented by reasonably cheap means, and the crop thereby insured against damage by these attacks. The careful grower should leave nothing to chance.

To fight the disease, we should, first of all, learn its general nature. Both the blight of the tops and the dry rot of the tuber are caused by the same parasitic plant or fungus, called *Phytophthora infestans*. The wet rot of the tuber only follows the dry rot as a natural result, and would follow in the same way when the tuber is killed by frost or any other cause. The fungus which causes the blight and dry rot is killed in the ground by frost, but lives through the winter in the tubers, and when these are planted the fungus grows up inside the stem. In July and August it sends fruiting branches out from the undersides of the potato leaves, upon which it produces its spores or seeds. These spores are produced in great number and carried freely about by the winds, so that the infection spreads quite rapidly. Our aim now must be to kill these spores or seeds, or prevent their full development. This can be done by spraying the vines, at the proper time or times, with the so-called Bordeaux mixture, prepared as follows:

Dissolve six pounds of copper sulphate (blue vitriol or blue-stone) in two or three

gallons of hot, or eight to ten gallons of cold water, in a wooden tub. Then slack four pounds of fresh lime (in an emergency you can use six pounds of air-slacked lime), and after slackening add water enough to make a thin whitewash. Strain this through a fine sieve, or a piece of cheese-cloth, to remove all lumps, then pour it slowly into the copper solution. Now add water enough to make twenty-two (better twenty-eight) gallons of the whole mixture, and it is ready for use. If

effect of the different elements of fertility employed.

This idea is illustrated in a practical manner in a recent bulletin of the Kentucky Experiment Station, giving the results of experiments with corn. The soil on which the experiments were made was what is termed a "blue-grass soil," derived from the lower silurian limestone and supposed to be rich in phosphoric acid, although worn by many years of cultivation. The elements used were

tioned, and at the comparatively small cost of a moderate quantity of the three fertilizing ingredients.

W. H. YEOMANS.

THE DAIRY INTEREST.

Dairying has become one of the most important branches of farming, and the prospects are that it will increase largely during the next ten years. Whether the profits of dairying will be any better depends partly on the dairymen themselves and partly upon legislation. We need laws that will compel makers of bogus butter and cheese to brand and sell their products for just what they are; and until we get those laws we must work under a great disadvantage, for we must sell our butter and cheese in competition with that made from grease and oil, and of course we will suffer loss in consequence.

On our own part we can do much to increase our profits by keeping better cows, feeding them better and working up their product in a more scientific manner. There are many dairymen who are to-day making butter after the manner of their fathers, and of course they complain that there is no money in the business. There is money to be made in dairying if we will use all the means at command to make the business what it ought to be.

THE COWS.

We must have good cows. There is no use in dairying with poor cows. Too many are trying to get along with a lot of scrub cows—cows that when times are good will barely pay a profit over cost of feed, and when feed is high and dairy goods low, bring their owners into debt every day in the year. Why is it that dairymen are so unconcerned about the quality of their cows? We see men who, in any other branch of farming, have the very best animals and implements, while they keep a mean lot of cows, and their facilities in the dairy-room for making butter are of the poorest. Is it because dairying has been a side issue, or because the dairyman has inherited certain notions about his business that are out of date but he has not been able to get rid of? In either case there is plenty of room for reform, and now is a good time to begin.

Beef cattle are now selling for more money than for a long time past, and the demand for beef cattle has made cow beef more salable than formerly, and now is the time to get rid of the cows that do not pay; sell them and replace them with others that will do good dairy work. It were better, far better, to give two or three poor cows for one good one, and thus reduce the herd one half or two thirds, than to go on feeding a lot of cows that pay little or no profit.

Another way to get good cows is to raise them by breeding the best cows you now have to a first-class milk or butter bull. Registered bulls can now be bought cheaply, and there is no excuse for breeding to scrub bulls. Two or more near neighbors can buy a bull and use him in common, and the expense to each would be light and the profit great. None but those who have seen it can realize the

great improvement from the first cross of a good bull on common cows. If the bull be a very prepotent one, some of the calves from the first cross will bear a striking resemblance in form and color to the thoroughbred. The same bull can be used on his own daughters, and sometimes on his granddaughters; but this is rather too close inbreeding in some cases.

FEEDING.

There is almost as much room for improvement in feeding as in breeding. There are many cows fed year after year that never have a chance to show what they can do, because they never have enough feed—sometimes not one quarter enough. It is wonderful how much good feed a first-class cow can eat with profit; and cows that have been regarded as being only moderate milkers may really be of the best, and only require plenty of feed and good care to show their superiority.

We should test each cow by feeding her a good ration, beginning with a moderate quantity and slowly increasing it so as not to get her digestive system out of order.

We may be surprised at the result, and find out what a loss we have been sustaining by not knowing the working capacity of our cows. Our object should be to get a certain amount of milk or butter out of the fewest number of cows; the fewer the number of cows we keep to do the requisite work the better each cow pays us. We want cows that will pay a big profit per head. It is the big herd of only a few really good cows that pays, not the big herd of many average cows. The size of the herd ought to be judged by the work done, not by the number of cows it contains. Many ten-cow herds are practically larger than others that number thirty cows. If intensive farming will pay anywhere it will pay in the dairy branch of it. We want concentrated effort in the cow, in the feed and in the dairyman. We want everything connected with dairying to be much in little.

KEEPING CREAM IN HOT WEATHER.

If one has no ice it is difficult to keep the cream from getting too sour before churning-day. A cool spring in which to place the cream-cans is not always available, but the well is, and if a light wicker basket is put over the well the cans can be lowered down to the level of the water, and the temperature will be found to be about right to keep the cream and ripen it for churning. The temperature of the well is even; there are no sudden changes, and the cream, when it comes out, is not thick and sour, as it would be in a dairy-room subject to sudden changes from temperate to sultry heat. The well is also a good place to keep the butter and harden it for market.

DILUTING THE MILK.

Last summer the ice crop was short in many parts of the country. Our ice gave out the first of July, and we didn't know what to do about raising the cream until we hit upon the expedient of diluting the milk with fifty per cent of well water when it was strained into the deep cans in the creamery. This answered the purpose. The cream was all up in a few hours, and the skimmed milk was very poor for feeding purposes; but the addition of some linseed meal made it all right to feed to calves and pigs. This method of diluting milk for cream raising can be practiced with any style of getting the milk, I suppose, but it is probably better to use deep cans set in a tank of water. It will be worth while to make note of it in case the ice should give out before cold weather.

BREED THE HEIFERS YOUNG.

I like to have a Jersey heifer calve at two years of age. Some say it stunts them to breed so early, but I have not found it to be so. I notice that some Holstein breeders have their heifers drop their first calves about as early as the Jersey breeders do, and it appears to me that the sooner the heifer commences her milking the better and more persistent milker she will become. The difference between breeding heifers to calve at two years and at three is the loss of just one year's use of the cow, and I don't see anything to be gained by waiting till the heifers are three or even two and a half years old. It certainly doesn't injure the heifer, and I think helps her. She will grow large enough for a dairy cow and she will make as good a milk or butter cow as one that is bred older. So why not have the use of one year more of a cow's life?

I breed my cows to calve every year, and though I have made no comparative experiments, think I get better results than I would by letting them go over the regular time. I believe that they are surer to get in calf if bred within a short time after calving, and it is therefore easier to regulate the time of having the cows come in. Once or twice when I failed to breed cows at the regular time, and let them go two or three months longer than usual, I found some trouble in getting them in calf. I attributed it to the fact that it had been so much longer than usual before they were bred after calving. Heifers bred young, I notice, are easier to get in calf than those allowed to run longer before being bred; and take it altogether, the early-bred heifers pay the best and are the most satisfactory. A. L. CROSBY.

Summer Weakness

Loss of Appetite, Sick Headache, and That Tired Feeling, are cured by

Hood's Sarsaparilla



FIG. 3.—SIDE VIEW OF FRAME, WITHOUT ROOF RAFTERS.

to be put on with a watering-pot, which is a more wasteful as it is a more laborious method, dilute to thirty-three gallons. The mixture tends to settle to the bottom, hence must always be stirred before using and also while being sprayed upon the plants.

The sulphate of copper does not dissolve very readily, if thrown into the bottom of a tub and covered with water. This is simply owing to the tendency of the saturated solution to remain at the bottom, while the water above does not take up any of it. This is easily remedied by putting the sulphate of copper in a bag of muslin, cheese-cloth or similar material, and suspending it part way into the water. Thus, as it dissolves, it diffuses through the entire body of the water, with a decided tendency to sink towards the bottom, leaving the solution weakest on top in the vicinity of the copper sulphate. I am indebted for this excellent suggestion to a correspondent of *Country Gentleman*.

By far the best way, because the most economical and most convenient, is to apply with a spraying-pump and a hose with a good nozzle. I find the knapsack sprayer very useful for the purpose. Of course, if potato-bugs are troublesome, a little Paris green, say two ounces to the twenty-two or twenty-eight gallons of mixture, may be added, although it is claimed that the Bordeaux mixture alone is sufficient to drive away or kill the beetle. Spraying for blight and rot should begin at the earliest date that blight is liable to appear, which will probably be from the first to the middle of July, and repeated about once in two weeks until the period of danger is passed. From three to five applications may be required. Under ordinary conditions, however, it will be sufficient to watch the field carefully through the latter part of July and August, and spray as soon as any marked signs of the blight are seen. But do not wait until the blight begins to spread badly, or you will be too late. Repeat at intervals of about two weeks. Put on enough to moisten the leaves thoroughly, which will require from forty to sixty gallons per acre. Ninety gallons will be needed if put on with a watering-pot. The cost of one application will be \$1.20, or a little more, per acre.

AVAILABILITY OF FERTILIZERS.

From the farmer's standpoint the agricultural value of fertilizers is the only one that he cares to consider; that is, it is the immediate or future productive capacity that concerns him more than anything else. A fertilizer that will add nothing appreciable to the productive capacity of the soil is in reality dear at any price, and the best chemists will not deny that there may be a wide difference between the agricultural value and the actual commercial value, which represents the cash that is required to procure it.

The experiments that are being carried on throughout our country by individuals and experiment stations show many important facts; but chief among them all, the necessity of testing soils for the purpose of determining the best course to be pursued. The production of large crops may be secured by a liberal use of fertilizing material; but then the question of advisability arises, especially if the increase is not proportionate to the value of fertilizing material necessary to secure the same, and without a knowledge of the

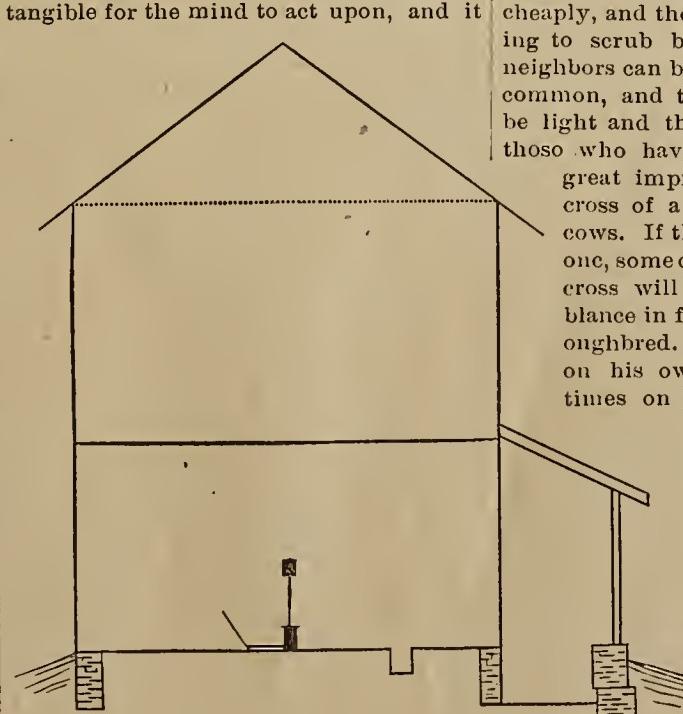


FIG. 4.

brings it right to the point that all farmers want to know. But because the result was so at Lexington, Ky., farmers cannot discard every element of fertility except muriate of potash, and use that alone, because soils vary in character, and another soil might reverse the results. But farmers can test their soils and determine these questions as applied to their own soils, with a prospect of getting information fully as valuable as that above men-

tioned, and at the comparatively small cost of a moderate quantity of the three fertilizing ingredients.

W. H. YEOMANS.

THE DAIRY INTEREST.

Dairying has become one of the most important branches of farming, and the prospects are that it will increase largely during the next ten years. Whether the profits of dairying will be any better depends partly on the dairymen themselves and partly upon legislation. We need laws that will compel makers of bogus butter and cheese to brand and sell their products for just what they are; and until we get those laws we must work under a great disadvantage, for we must sell our butter and cheese in competition with that made from grease and oil, and of course we will suffer loss in consequence.

On our own part we can do much to increase our profits by keeping better cows, feeding them better and working up their product in a more scientific manner. There are many dairymen who are to-day making butter after the manner of their fathers, and of course they complain that there is no money in the business. There is money to be made in dairying if we will use all the means at command to make the business what it ought to be.

THE COWS.

We must have good cows. There is no use in dairying with poor cows. Too many are trying to get along with a lot of scrub cows—cows that when times are good will barely pay a profit over cost of feed, and when feed is high and dairy goods low, bring their owners into debt every day in the year. Why is it that dairymen are so unconcerned about the quality of their cows?

We see men who, in any other branch of farming, have the very best animals and implements, while they keep a mean lot of cows, and their facilities in the dairy-room for making butter are of the poorest.

Is it because dairying has been a side issue, or because the dairyman has inherited certain notions about his business that are out of date but he has not been able to get rid of? In either case there is plenty of room for reform, and now is a good time to begin.

Beef cattle are now selling for more money than for a long time past, and the demand for beef cattle has made cow beef more salable than formerly, and now is the time to get rid of the cows that do not pay; sell them and replace them with others that will do good dairy work. It were better, far better, to give two or three poor cows for one good one, and thus reduce the herd one half or two thirds, than to go on feeding a lot of cows that pay little or no profit.

Another way to get good cows is to raise them by breeding the best cows you now have to a first-class milk or butter bull. Registered bulls can now be bought cheaply, and there is no excuse for breeding to scrub bulls. Two or more near neighbors can buy a bull and use him in common, and the expense to each would be light and the profit great. None but those who have seen it can realize the

great improvement from the first cross of a good bull on common cows. If the bull be a very prepotent one, some of the calves from the first cross will bear a striking resemblance in form and color to the thoroughbred. The same bull can be used on his own daughters, and sometimes on his granddaughters; but this is rather too close inbreeding in some cases.

FEEDING.

There is almost as much room for improvement in feeding as in breeding. There are many cows fed year after year that never have a chance to show what they can do, because they never have enough feed—sometimes not one quarter enough. It is wonderful how much good feed a first-class cow can eat with profit; and cows that have been regarded as being only moderate milkers may really be of the best, and only require plenty of feed and good care to show their superiority.

We should test each cow by feeding her a good ration, beginning with a moderate quantity and slowly increasing it so as not to get her digestive system out of order.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

NO GAPS WANTED.—The editor of the Germantown *Telegraph* puts it very tersely thus: "Keep the whole garden busy. If a plant fails, put another in its place. Allow no gaps in the rows; if you don't notice them, weeds will. A weed is a thief; it robs the soil of its manure and all the near plants of their very life. Fill up every gap with seed or by transplanting, and if you can't do either, lay down boards to smother the weed seeds which lie in wait in the soil to pop up their heads and grow. Keep every foot of your garden working night and day for the benefit of the soil and for your own benefit also. A busy patch is both a credit and a profit. You can't make a fortune out of one cabbage or one turnip, but you can always make some money out of many."

Every sentence of this is worth remembering and repeating, and the teaching cannot be put in words too strong. Idleness is the devil's best school. This applies to the garden as well as to people. The idle boy's ideas soon run to mischief; the idle garden runs to weeds. Just as soon as one crop is harvested and the ground can be cleared, stir the surface and plant *something*. It is time yet for turnips and spinach and endive and radishes, etc. Rather than let the garden grow weeds, sow flat turnips; and if you do not wish to have any more cultivating to do, you may scatter the seed broadcast. The turnips will soon cover the whole area planted, choke out weed growth and keep the soil shaded. The crop can rot on the ground, adding to its fertility, unless you wish to make use of it for feed or pasture.

I do hate gaps in the rows of growing vegetables. In my sight it mars the beauty of a row of thrifty-growing onions or celery to see a bare space in it. Often I take great pains to remedy such blemish. My two rows and part of another of White Plume celery, set out in June, suffered somewhat from the long drouth, and a number of the plants died, leaving ugly gaps. When I took up the plants in the fall with a trowel, carefully preserving roots by taking up a good big root of its own plant, and at once replanted to fill the gaps in the two whole rows. There were exactly plants enough to repair the damage, and now the rows look complete, and, to my eyes, as beautiful as a flower-bed. The third row, after the removal of the White Plume, which were occupying one end, can now all be planted to New Rose, Giant Pascal or Golden Heart, and thus made to present a uniform appearance and receive uniform treatment, all of which would not have been possible if the White Plume were left on one end and the row filled out with one of the varieties needing high earthing or boarding up.

SHADING CELERY.—Celery plants find a little shade quite congenial and beneficial in hot, dry weather. One of my two rows of White Plume, both planted in a manure-filled dead furrow, received a slight shading during part of the day by a row of thrifty-growing Alaska peas standing next to it on the south side. This row has done decidedly better than the other that is fully exposed to the sun, almost no plants having been killed out by the drouth, while there were many gaps in the exposed row until filled out again by replanting. I believe it would be a most excellent plan to make a practice of providing shade in this or a similar way for celery. If the rows are to be four feet apart, for instance, rows of some tall-growing, late pea variety, like Champion of England, may be planted four feet apart in May, and rows of celery between these pea rows in June or July. Perhaps corn might do in place of the peas. I believe shade thus secured would prove to be of great benefit, especially if the season should be dry.

Another good way of accomplishing the same purpose is to set up a line of ordinary boards on edge along the row of celery, on sunny side, which boards may be held in place by short stakes driven into the ground on each side of boards. Any kind of cheap, old boards will answer for this; or the boards which are intended for use

in bleaching (now a common method) may be utilized in this preliminary way.

For winter use, any of the varieties of celery named may yet be planted, but the ground should be rich and the plants large and well rooted, so they will grow right along and as thrifty as possible; and if a slight shading is given, as here suggested, you may be pretty sure of fair success.

FIGHTING INSECTS.

Referring to our advice to "crush the squash-bug," a subscriber, Mr. J. T. Moulton, of Arkansas, suggests the possibility of inducing the mother bugs, by means of a scent or aroma more fascinating to them than even squash, to lay all their eggs in a little corner of the patch, and leave the rest untouched. "Just such thugs happen in the case of other pests," he says. "I doubt whether the principle of preferential oviposition has ever been worked for the hundredth part of what it is worth."

This is very true; and in the case of the squash-bug it only remains for us to find a plant which the pest likes more than squash. We have often planted Hubbard squash, or even pumpkins, for the purpose of providing bug food and as a protection to cucumber and melon vines close by. Sometimes this device seems to be successful, sometimes it is not. So in case of onion-maggot. Radishes and cabbages planted in the onion patch appear to act as "catch" plants. The fly prefers radish and cabbage flavor to onion flavor, and consequently deposits its eggs on the "catch" plants, leaving the onions untouched. Sometimes, however, onions are badly attacked, even with plenty of those "catch" plants near. So it is with the currant-worm, which usually prefers gooseberry aroma to currant flavor. With gooseberry bushes planted here and there among the currants, the latter often remain clean, while the worms are all found on the gooseberry bushes. Sometimes, however, we may find plenty of worms on the currants and none on the gooseberries. The rose-clafer prefers the Clinton grape to all other varieties, and the magnolia to almost anything else. Consequently, we may use the Clinton grape and the magnolia as "catch" plants.

These are some of the leading instances where "the principle of preferential oviposition" has been made use of in the fight against insects. Of course, if we can succeed in concentrating our foes in small patches or clusters of plants, we can concentrate our efforts upon the points of attack, and need not waste time and material in protecting large areas.

A more scientific way of fighting insects, however, is now coming in vogue, and this is by infection with a contagious disease. Experiments made with the chinch-bug and others, more recently with the cabbage-worm, have shown the feasibility of the plan. Undoubtedly, every insect is subject to contagious fatal diseases. If we can get hold of such disease germs, and propagate them, it will be an easy matter to get rid of our insect foes. Here is an inviting field for investigation.

Orchard and Small Fruits.
CONDUCTED BY SAMUEL B. GREEN.

NEW STRAWBERRY VARIETIES.

P. M. Augur, in a paper before the Massachusetts Horticultural Society, said: In producing new strawberry varieties, the mother variety, from which the seed is taken, should be a pistillate, chosen for its good points, with a good male parent in close proximity, in which case a true cross is wellnigh inevitable. The following was a favorite plan with the venerable Seth Boyden: Plant four bisexual plants of a select variety in a small frame, and in the center set a chosen plant of the desired pistillate variety for the mother. Let all these plants be forced to their highest development, especially the mother plant. Just before the blooming season cover the frame with a sash to exclude insects from bringing foreign pollen.

Remove early from the center plant all but three or four principal fruit stalks, that the strength of the vital forces be concentrated on them. As soon as the most important blooms on mother plant open, remove the sash and fertilize with pollen from the other plants, using a camel's-hair brush; then replace the sash, which should be removed permanently as soon as the fruit is well set; the finest

only of these cross-fertilized berries should be used for seed. At perfect maturity wash the berries and wash out the chosen seed; place the seed on ice for a few days, then sow in a box placed in a greenhouse or conservatory, and when the plants attain sufficient size, transplant to the open ground. These plants, with good attention and culture, will be large enough to stand the winter well with suitable covering, and will speedily be in bearing condition. The principles involved in choosing parent varieties are: First, to choose those having as many strong points as possible in common; second, when the mother variety lacks in some one essential, select the male parent having that missing quality most fully. In short, aggregate in the prospective progeny as many strong points as are retainable. Of course, we cannot sum up all the good points of both parents and know we have that aggregate, but possibilities lie in that direction.—Orange Judd Farmer.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Aphides on Quince Leaves—Influence of the Moon.—J. R. G., Brownsville, Tenn. The quince leaf received was covered with plant lice (aphis). You had better use the kerosene emulsion recommended in these columns lately.—So far as known, the phases of the moon do not effect plants in any way whatsoever.

Fertilizer for Haviland and Bubach.—J. J. T., Richmond, Va. I think the Michel's Early is one of the best to produce pollo, and while the fruit is not very attractive, yet it is firm, and for a bisexual variety very prolific. It is, too, a very strong, healthy grower. It fertilized my Haviland, Bubach No. 5 and Warfield this year very successfully.

Strawberry Without Runners—Thornless Blackberries.—Mrs. M. J. T., Quincy, Ill. (1) The strawberry you refer to is well known among horticulturists as the Hautbois. There are several varieties of it. (2) There is a blackberry with but few thorns, called Wachusett Thornless. It is quite prolific, but we have other berries that are larger and consequently more profitable, such as the Snyder, for instance. There are several varieties of gooseberries without thorns, but the best kinds all have thorns, though in varying degrees.

Mildew on Black Currents.—G. C. T., New Boston, Mich. The mildew is a minute plant which produces the disease by growing in the tissue of the leaf. It is not caused by the ground or worms, although anything that weakens the vitality or checks the growth of the plant will make it more liable to attacks of mildew. If you use lime of sulphur, as recommended in these columns for mildew, I think you will have no trouble in keeping your plants clean. Locations that are close, shut in and do not have a free circulation of air, are most liable to this trouble.

Cherry Not Fruiting.—E. F. S., Deering, Maine, writes: "I have a tree on my place that I bought from a nursery here for cherry. It has blossomed very full every year, but the fruit always falls off as soon as formed, so that I have never been able to tell what it would be. I have tried everything that has been recommended to me, but without success. I have cut a strip out of the bark two inches wide clear around, and it neither killed nor cured. I have driven nails into it, and have other stone fruit in blossom near it. I have had the tree ten years. The trunk seems to grow thick, but the top does not seem to get much larger. It is about six inches through at the ground."

REPLY:—I cannot explain to you just the reason your cherry-tree does not fruit. It may be that it is some worthless seedling stock that has been sold for a named kind; but whatever the trouble is, since it is a good grower I would have it grafted, if possible, with some well-known, hardy, good kind. Failing in this, I would cut it down.

Gooseberry Culture—Currents—Distance Apart to Plant Plums.—A. W., Rogers, Ark. (1) Gooseberries should be planted on rich, rather moist soil, six feet apart each way. They should have clean cultivation and should have from one half to two thirds of their new growth cut back each year after they begin to fruit. Probably the Houghton seedling will do best with you, but you had better try a few each of the Downing, Smith Industry, Champion and Triumph. The three last are very large kinds, and not very generally tried. (2) Currants will pay if they grow well and you have a good market for them. They should be planted the same as gooseberries. (3) Put blue Damson plums twenty feet apart each way and quinces twelve feet apart each way. The profit from these depends upon the care and skill given them and the market that is accessible. They are generally profitable when well grown.

Hybrids.—A. M., Pittsfield, Mass., asks: "Is there any certain law by which we can tell what will be the value of a hybrid between two species or between two varieties of the same species?"

REPLY:—We know but very little as to what will be the outcome from the hybridization of any fruits. Practically all we know about the result is that the offspring may partake of the nature of both parents to varying degrees. Sometimes the points of one parent will quite cover up and apparently prevail absolutely over the other; but in such cases we cannot but think that one parent's points remain latent in the offspring and may show in the next generation. There are some apple, peach, plum and other trees which propagate them-

selves nearly or quite true from seed. I look upon these varieties as races, and I think that hybrids between them and those with weaker powers of transmission would necessarily partake largely of the stronger; but this power of transmission does not pertain to all varieties of any species, even when isolated.

Apple Rust.—J. T., McNab, Ala. The life history of this rust is briefly as follows: The spores of the rust on the apple leaves or fruit ripen in midsummer and pass to the red cedar-trees, the result being the growth on the cedar commonly known as "cedar-apples." The spores of the cedar-apples do not ripen until April, when they ripen and pass to the foliage or fruit of the apple, causing rust. The spores on the cedar-apples are produced at the time they throw out the irregular, gelatinous, scarlet horns, which are sometimes so conspicuous in the spring on our cedar-trees. The cedar-apples die as soon as they have produced their spores, but the rust plant (it is a minute plant) grows on in the apple tree, and may remain in it for several years. The fruit, when attacked, is rendered worthless, and the ripening of the fruit may be prevented by the early destruction of the leaves by the fungus. Prevention.—At present no practicable remedy is known for this disease. Where the red cedar is not abundant it may be possible to free the orchards from the disease by destroying the cedars; but where the cedars are abundant and valuable, this method is not practicable, and we can only suggest that since some varieties are more subject to the disease than others, that only those that are most exempt from it be planted. All badly infected trees should be removed. It has been suggested that healthy trees might be preserved from attack by spraying the foliage, and at intervals of two weeks thereafter until the cedar-apples are dried up.

Peach Culture.—R. A., Camden, S. C., writes: "We have commenced a peach orchard of one acre, on sandy soil with subsoil. It was very poor when cleared, fifteen years ago. Most of this time it has been planted in potatoes and enriched with stable manure, until now it will produce twenty or twenty-five bushels of corn without further manuring. This is the plan of treatment proposed, unless your advice shall change it: Start the limbs two feet from the ground, prune carefully and keep free from insects. Each year in the latter part of winter scatter broadcast twelve two-horse loads of oak leaves, three hundred pounds acid phosphate and same amount of muriate of potash, putting commercial manures near the trees, and plow the whole under lightly. You will observe that I avoid nitrogenous manures. From reading and observing I am convinced they will make a large, beautiful, but soft and insipid fruit. Cotton, which is not at all an exhaustive crop, will be plowed for a few years, and then the trees will be given full possession, cultivation being continued shallow. Please comment and advise."

REPLY:—Your plans are exceptionally good for developing a healthy growth. While nitrogenous manures may produce inferior fruit, yet their injurious effects, when used too largely, is generally seen in an increased, soft, tender growth of wood, which is very susceptible to diseases. For the benefit of some others of our readers it might be well to say that the addition of the oak leaves will keep the land supplied with humus; that is, vegetable matter in the soil. This might be supplied as well in old straw or other rubbish, were the same as available, or by plowing in some green crop, such as rye. The acid phosphate and muriate of potash have been long and favorably known as fertilizers for the peach and other fruits. If the growth is not satisfactory after a few years, I think the cheapest way of supplying the nitrogen would be to seed the land to red clover, harvest the crop and plow the land the following spring after the clover has started a little; but this should not be done unless the growth is inferior.

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EXTRACTS
FROM CORRESPONDENCE.

FROM MINNESOTA.—In the "Extracts from Correspondence" I notice about all the western states reported but ours. It is, indeed, right that the western states should make these encouraging reports, because the West is the growing and prosperous portion of the United States to-day. This is the place for the poor to become rich and prosperous, and I can say that this is the state and Kerkhoven the place to acquire that condition. The country about here is very productive. The farmers are all doing well. We don't mind the winters, and the summers are beautiful. Fine farming land can be bought for \$10 per acre, but the price is rapidly increasing. This year there is a great inquiry for lands; next year they will be increased from \$3 to \$5 per acre. The crops are very good this year. We never had a failure.

E. C.

Kerkhoven, Minn.

FROM MISSOURI.—It seems that most of the correspondents have the best country in the United States. I don't say that we have the best, but I think it is as good as any and better than some. I have been here eighteen months and like the country better than I ever thought I could. The land is not smooth or as rich as where I came from, but most any man can have a home of his own. Any man can live here that will work and half manage. One great trouble here is so many have got into the habit of hauling and making ties for a living and neglect their farms and crops. This is as good a fruit and vegetable county as there is in the state. We can and do raise some fine corn, as well as wheat and oats. Our wheat harvest is good, considering the late sowing. There are some good, cheap, improved farms here for sale. We have an abundance of small fruits of all kind. We are always blessed with bountiful crops of small fruits, both tame and wild. We have rock and some gravel to contend with.

S. L.

Elk Head, Mo.

FROM TENNESSEE.—This section of the country, while no Eden, and with some serious drawbacks (the growing of tobacco and the whiskey distilleries are to me the most serious), has decided attractions, and particularly to those seeking a milder climate. I have lived in Pennsylvania, Illinois, Minnesota, Missouri, Kansas, Nebraska, Michigan and Florida, and have to say that for salubrity of climate, good water, and adaptation to general farming, and particularly fruit raising and general gardening, it is fully equal, and in several respects ahead of any of them, particularly as to a good, healthful climate and pure, free stone water. We are on the table-lands, 2,200 feet above the Gulf of Mexico, 22 miles from Nashville, and in a few hours' reach of several large cities, thus giving us the choice of several markets. The thermometer seldom indicates a higher temperature than 90°, and but a few degrees below freezing. The citizens are hospitable. Quite a number are from the North and West, and are generally well satisfied with the change.

V. F.

Green Brier, Tenn.

FROM MISSOURI.—Livingston county is in the northern part of the state. It is crossed by three railroads, centering at Chillicothe, the county-seat, a city of 7,000 inhabitants. Our county has no bonded indebtedness. It has a school fund of \$130,000, 99 school-houses, and churches in every neighborhood. The soil is a rich, black loam, and easily worked. The face of the country is rolling and well drained. A small portion of it is hilly and covered with timber. About one third of the county is timber, the balance prairie. There is an abundance of good water, building stone and coal. The leading agricultural products are cattle, hogs, apples, wheat, oats, corn, hay and butter. The interest in fruit growing is increasing. We shipped over 80,000 barrels of apples from this county last year. One man evaporated 20,000 bushels. There is a better prospect now for apples than there was this time last year, and there will probably be several times as many in a few years. Land ranges from \$15 to \$35. We welcome everybody that is willing to work.

M. L. B.

Cavendish, Mo.

FROM TEXAS.—The school lands belong to the state of Texas—the government has no land in Texas. The minimum price of school land is \$2 per acre. They are sold on forty years' time, with interest at five per cent per annum. Under the present law, none but actual settlers are allowed to purchase state school land. When the purchaser has occupied his land for a term of three consecutive years, and kept the interest paid up, he has the option of paying it all out and obtaining a patent to the same. There are some disadvantages here, and some people become dissatisfied and return to their former homes. There seem to be comparatively few people sufficiently considerate to patiently bear the privations of a new country; while there is a class of malcontents who are displeased with all parts of the world. They, of course, are dissatisfied, and find many faults. But our Panhandle and Llano Estacado are receiving a great influx of thrifty, intelligent farmers, who are attracting the attention of the world to the wonderful development of this country.

W. H. C.

FROM KANSAS.—Last year crops were almost a complete failure because of drought. This caused much suffering, and a good many settlers had to have aid. In looking over the country now, with bountiful crops growing, one can hardly believe such was the case. At this writing we have had plenty of rain, but the first two weeks of June were a little cool for corn. Wheat, oats, barley and cane are immense. Cheyenne is the north-west county of the state. It has a fine, rich soil, easy to work, mostly high prairie, free of stone or gravel and covered with a heavy coat of nutritious buffalo grass. Here is to be found cheap homes for thousands who may wish them, in a country that can hardly be equaled anywhere that the writer knows of. I am a Marylander by birth, and have lived in several of the older states. I think I have lived here long enough to speak of the advantages and drawbacks of this section. It is far better to come in colonies or send some representative to look at the land and crops. This is a land of bright sunshine, pure air and water, and to all who desire homes for themselves and children I would say, come now, or this fall, as this country will surely have a healthy boom next year.

M. F. B.

Gurney, Kan.

FROM SOUTH-WESTERN MISSOURI.—In "Extracts from Correspondence," O. K., of Bartlett, Mo., states: "South-western Missouri is a timbered, rough, mountainous country, especially Shannon, Howell, Douglas and Ozark counties." Now, any reader of FARM AND FIRESIDE will see, by consulting a county map of Missouri, that the above-named counties are extreme southern counties, and not south-western counties. O. K. states: "It is not a good stock country, and never will be." Now, the term "stock" includes horses, cattle, hogs, sheep, etc. I would like to ask O. K. if it is not a good country to raise both sheep and hogs. As it requires but little feed during the short winter months to carry sheep through in good shape, while nine years out of every ten, hogs will live almost the entire winter on the immense crop of mast which that heavy timber affords. We claim that there are portions of south-western Missouri that will compete with any country on the American continent. Take the counties of Bates, Henry, Vernon, Barton, Jasper, and parts of St. Clair, Cedar and Dade, which are prairie counties interspersed with woodlands, well watered, and with as fine soil as found anywhere, adapted to all kinds of grain, fruits and vegetables, and especially adapted to stock raising. Hence, we claim that the counties mentioned by O. K. are counties of southern, and not south-western Missouri. We have been over the greater portion of south-western Missouri, and must say that there is more good country than bad, throughout the territory. We have lived in Bates county thirteen years, and have not failed in a single crop. Of course, some years have been more abundant than others, but we, as a county, always raise plenty for home consumption and some to spare. You will see by looking over the state statistics that Bates is one of the wealthiest counties in the state, all owing to her rich, black soil and cheap fuel. She furnishes more coal than any other county in the state, besides having an abundant supply of timber. Land can be obtained here at from \$5 to \$50 per acre, owing to location and improvements. Land rents for either grain or money. Grain rent usually runs from one third to two fifths, while money rent is from \$2.50 to \$4 per acre.

W. A. B.

Butler, Mo.

FROM FLORIDA.—Fort Myers is on the south side of Caloosahatchie bay, where we have perpetual summer, sunshine and sea-breeze, a plenty of fish, game and oysters, fruits and flowers, where the cocoanut blossoms every twenty-eight days. We have 250,000 head of cattle that were never fed. We have an immense county, from 5 to 50 feet above sea-level, of pine, prairie and hummock land. We need never buy fertilizers, as we have muck, manure and phosphate enough to supply the state a thousand years. The United States census report of May 31, 1890, shows Lee to be the healthiest county in the United States, and Superintendent Porter withheld the pay of our enumerator for nine months, until he had time to investigate his report by a private secretary. Our people have a vitality second to no other place in the world. It is the more remarkable when we consider that so many of our people came here invalids, and could not live in a northern country, and that we have a community where the men greatly outnumber the women. Land varies in price from \$2.50 to \$100 per acre. There are some cheap state, school and considerable government lands that can be homesteaded. We have about sixty inches of rainfall a year, the greater part from June 1st to October 1st. No clods and but little mud or dust. The most profitable crops are winter vegetables, rice, sugar-cane, Cuban tobacco and sea-island cotton. Northern cereals will grow, but there is not much money in them. The most profitable fruits are strawberries, guavas, pineapples, bananas, mangoes, sapodillas, alligator pears, cocoanuts, oranges, lemons, limes, grape-fruit, and all semi-tropical fruits do well. There is plenty of work at good wages, and fine openings for all, rich or poor. Dressed,

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Our fireside.

LOVER'S LANE.

Saint Jo, Buchanan county,
Is leagues and leagues away,
And I sit in the gloom of this rented room
And pine to be there to-day;
Yes, with the London fog around me,
And the hustling to and fro,
I am fretting to be across the sea
In Lover's Lane, Saint Jo.

I would have a brown-eyed maiden
Go driving once again,
And I'd sing the song, as we snailed along.
That I sung to that maiden then;
I purposely say "as we snailed along,"
For a proper horse goes slow
In the leafy aisles (where Cupid smiles)
In Lover's Lane, Saint Jo.

From her houdoir in the alders
Would peep a lynx-eyed thrush,
And we'd hear her say in a furtive way
To the noisy cricket: "Hush!"
To think that the curious creature
Should crane her neck to know
The various things one says and sings
In Lover's Lane, Saint Jo!

But the maples, they should shield us
From the gossips of the place,
Nor should the sun (except by pun)
Profane the maiden's face;
And the girl should do the driving,
For a fellow can't, you know,
In the leafy aisles (where Cupid smiles),
In Lover's Lane, Saint Jo.

—Eugene Field.

A MODERN STANDISH.

AFAVOR?" repeated Rob Bonnell, leaning back in his pine office-chair, the arms of which were becoming attenuated from the persistent whittling of its successive occupants. "A dozen, if I can."

"I knew you would," declared Henry Dreier, in a tone that if confident was also full of vague relief. "In fact, I really wrote Linnet that you would go."

"You did, eh?" returned Bob, tilting back and teetering on the rear legs of his chair in a dexterously reckless manner that would have driven a more impressionable individual than his partner wild with nervousness. "That was awfully kind of you. But where am I to go? And who in the world is Linnet? If you would only supplement your disposal of me with a little information I couldn't be sufficiently grateful."

Dreier grinned amiably and shifted his position in the doorway of the small western grain office. Less than a show of speech themselves, he was prompt to appreciate the ready reply of another.

"I've got Linnet is (rather awkwardly)—Linnet Josylan, you know."

"What?" in sudden comprehension. "The bride-elect. You never spoke of her otherwise than as Miss Josylan."

"Didn't I? By the way, I don't believe I ever told you much about her, anyway, beyond the fact that she is a kind of distant cousin of mine, and that we are to be married next Thursday."

"No," replied Bob, with a shake of his hand-some head, "you never did."

He was a tall, well-knit, athletic-looking fellow. There was in his whole bearing a certain easy grace that irrefutably bespoke good breeding and gentle associations. His dark-skinned, finely-chiselled face was bright with humor and alert with intelligence.

In every sense of the word was Henry Dreier unlike him. He was of medium height and heavily built. His movements were deliberate to clumsiness. His face was large and round and florid and fat. His stubby streak of a sandy mustache reminded one of that of Mr. Jefferson Brick, which Martin Chuzzlewit mistook for "a recent trace of gingerbread." His mild blue eyes were most kindly. Indeed, his general appearance was seraphically stupid. In reality, Mr. Dreier was the least stupid of men. He was most keenly and practically shrewd. His look of bland innocence, almost of helplessness, was a mask with which nature had capriciously presented him.

Those who fancied they could, by superior mental agility, compass a business or personal victory over Henry Dreier were apt to find themselves confronted with a counter move on the probability of which they had altogether failed to reckon. But he was hopelessly unromantic; there was no denying that fact. He had not in his composition a single grain of sentiment. And in his life love would be, as Madame de Staél avowed it was in the life of all men, merely an episode.

Of this Rob Bonnell had always felt sure; but when now his partner went on to speak of his sweetheart in his prosy, matter-of-fact way, he was more than ever convinced he was correct in his deduction.

"She's an eastern girl. Her people were wealthy, and she was educated with the greatest care. She grew up to think life was to be for her just a long procession of pleasures. Well, one day her father went all to pieces on the hoard of trade. The shock killed him. His wife didn't last many weeks after him, and then Linnet found she must work or starve. The former seemed, as you may suppose, the most acceptable alternative. She wrote to a cousin of her father who has a ranch out here, asking if she could secure em-

ployment teaching in this part of the world. There was a chance of her obtaining the district school, so he sent her word to come. She did so, but was too late. The directors had given the place to an earlier applicant. Linnet did not have enough money to take her home again, so she was obliged to remain at Blatchford's. Know them?"

"No."

"Well, they live over by Concordia. They are the near relatives of Linnet I have mentioned. Are they mean? You may bank on that. They think more of a nickel than I do of a dollar, and they've more dollars than I have. They told Linnet she could do the housework for her board, and the housework of their big barracks is no joke. She was plucky, and tried it; but you might as well harness a butterfly to a plow as Linnet to such drudgery."

He paused to weigh a load of corn for a man who had driven upon the scale outside. Then he scribbled a line upon the battered book that lay on the dirty window-sill.

"I used to go to Concordia pretty often, as you remember, and I got into the habit of stopping at Blatchford's. And—well, the long and the short of it is, I decided to marry, and to marry Linnet, at that."

Rob nodded interestedly. Never before had Henry been so confidential.

"She's pretty, and I like her quite as well as any girl I ever saw—indeed, better. I've built a fine house, you know. She shall have everything she wants. I'm sure we shall be very happy."

Rob smiled grimly. How prosaic Dreier was! How unemotional! The girl who could be content with the affection he offered would have all she deserved, Bonnell felt convinced.

"And now," said Henry, looking at his friend, "I'm in a fix. I can't go over there to be married on Thursday, as the decision about the new elevator the railroad men talk of may be made any day. It wouldn't do for me to be away."

Rob brought down the fore legs of his chair with a bang, and sprang to his feet, crying:

"Man alive, do you remember you would go to be married?"

Then Henry answered with his usual air of serenity:

"That's why I can't go. The very fact of my assuming new obligations would make it culpable in me to jeopardize my business."

There was amusement and contempt in the look Rob gave him.

Dreier thrust his short, thick hands into his pockets and continued:

"And so I wrote Linnet that you would go over for her Thursday and bring her to Belleville. We can be married here."

No longer could Bonnell conceal his exasperation.

"Good heavens, Dreier!" he exclaimed. "Can't you see that what you suggest is infinitely bad form?"

Henry did not see it. He turned deliberately to weigh the empty wagon that had rumbled back on the scale. Then he calmly faced the indignation of his partner.

"No girl," avowed that wrathful individual, fiercely, "at least no girl in her senses, would tolerate such dictation. You ought not to expect her to come and go as you decide, as if she were a trained terrier."

Henry smiled placidly.

"Oh, she won't mind. My absence from town might mean quite a heavy loss to me in a money sense."

"Defer your marriage, then."

"Postponements are unbusiness-like."

It was something suspiciously like an oath that Mr. Bonnell pulled his hat down over his brows and swung out of the office. He vowed over and over to himself that he would not go to Concordia. It was atrocious that he should be sent to bring and deliver a bride, as if she were so much merchandise! And yet did not a poor poet bring Lalla Rook to the arms of her royal lover? Yes, but the poet was the lover. Well, after all, what business was it of his? He had given his word to Dreier to do him the favor requested, and the future wife of his partner must be but a narrow-minded and spiritless creature, and utterly unworthy his savage chivalry in her defense.

So he went, but against his will, as Beatrice said when she invited Benedick in to dinner. It was still early, not ten o'clock, when he drew up his horses before the large, ugly frame farm-house on the outskirts of Concordia.

It was an April day, and a delicious one. The skies were softly, sunnily blue; everywhere were plows furrowing the dark sod; everywhere was budding greenery and budding boughs, and from the prairie grass came the persistently cheerful chirp of the meadow-larks. Kansas was that morning, as she not infrequently is, more prodigal of springtime promise than of midsummer fruition.

"Miss Josylan!"

The weather-beaten woman who had answered his brisk knock on the panels of the seldom-used hall door regarded him with stolid curiosity.

"Linnet? She's out with the children somewhere—gadding about as usual. Won't you come in?"

"No, thank you," replied Bonnell, taking off his hat in a fashion that the poor rich woman for a moment imagined implied supreme sarcasm. "I shall try to find her."

Find her he did. She was in the next field, with half a dozen roistering young Blatchfords about her. They were on their way to

seek the whereabouts of a nomadic hen, or rather of her nest. The fear that she would "lay out" had caused the mistress of the farm anxiety unutterable.

Although Bonnell had never seen Linnet there was no mistaking her. A girl city born and bred is, in the city, one of a multitude. In the country, especially in the new western country, she is distinctively and delightfully conspicuous. She is the transferred product of a more luxuriant and intricate civilization.

"Miss Josylan, I believe," said Bonnell.

She bowed slightly. She stood regarding him with a glance of quiet inquiry. She was a graceful girl of perhaps eighteen or twenty. Her gown of smoke-colored cashmere had never been fashioned by a Kansas dressmaker. It was artistically plain. It fitted her rounded young figure with glove-like smoothness.

"I have come," said Bob, with an embarrassment foreign to him, "from Henry Dreier."

The face before him—a very delicate, sensitive face it was, with dark-lashed, hazel eyes and a beautiful mouth—flamed scarlet from soft hair to white throat.

"He did not receive my letter, then? You are Mr. Bonnell?"

Bob assented.

"I wrote him," hurried on Linnet Josylan, "that I would not go to Belleville, as he desired."

Rob felt himself placed in an unpleasant position. Assuredly, the girl was neither narrow-minded nor spiritless, as he had supposed when he agreed to fulfill the request of Dreier. For, though her words were brief and simple, there was a vast deal of resentment in both tone and expression. But how in the name of heaven had such a woman promised to marry Henry Dreier? Suddenly and curiously he was awed.

"That's right, Linnet," piped up one of the group who stood gaping at the stranger, "don't ye go. I heard ma tell pa, yestday, that if you went to git married she'd have to pay 'ud be three dollars a week. Don't ye go."

Linnet looked up from the freckled and persuasive countenance of Master Clive Leonard Leroy Blatchford. All the color went out of her face with a rush. Something set and resolute came into it.

"I shall go with you," she said to Bonnell. She turned and walked toward the house.

"Poor little girl!" said Rob. He knew now why she was going to marry Henry. She would be her own mistress. She would be independent. She would be free from repellent labor and petty despotism. If the absorbed and passionate devotion all young hearts crave, it was not in the nature of Dreier to give her, she would at least receive kindness and affection. And, morbid sentimentalists to the contrary, half a loaf is preferable to no bread.

Bonnell went back to the road. He stood by the buggy waiting. He could hear within the house the sounds of angry and aggrieved protestation. When, carrying a satchel, Miss Josylan came out, down the path and to the buggy, her lips were set in a mutinous red line, and her hazel eyes were black with rebellion. Silently he helped her in. Silently they drove off. Warmer the day had grown. The fresh, half pungent scent of "broke" ground drifted to them. And faintly heard they the murmurous whir and hum that preludes the summer.

It is about three hours' drive from Concordia to Belleville. They had traveled more than half the distance, and almost in utter silence, when all at once poor Linnet broke down in a fit of childish weeping.

"Turn!" she panted. "Go back. I can't marry Henry Dreier. He is good; I know that. But to be with him always! Oh, no, no! I was foolish. I only wanted to get away from Blatchford's. I—I didn't think of the sin of marrying for such a reason. Take me back, please."

A force mightier than his will, mightier than himself, mastered Rob Bonnell. Trifling, dishonorable? Perhaps. But he could at that moment no more have held back the words that sprang from his heart to his lips and overflowed them than he could have restrained the fierce fury of the mountain torrent.

"Linnet, Linnet, I love you! Marry me!" he cried, hoarsely.

"Oh!" she whispered, and shrank away from him, trembling.

He had stopped the team. He turned in his seat and faced her. Their eyes met. There was that in his imperious, fervent, steady gaze that compelled surrender. Linnet's lashes drooped. Rob bent and kissed her. That broke the mad spell that was upon them both.

"Don't," she said. "Go on. I could care for you—yes. But the disloyalty would be more wicked than—than keeping my word."

Bonnell snatched the whip and gave the horse a lash. He drove straight on toward Belleville. He left Linnet at the hotel and then went straight to the office. He found Dreier alone and in high spirits.

"Well," he cried, "that elevator business was fixed to-day. We've come out several thousand ahead. What is the matter? You look like a ghost."

"Do I?" asked Bonnell, with a wan smile. "I ought to look like a scoundrel. I've fallen in love with your sweetheart, Henry. I asked her to marry me. I kissed her."

Dreier said not a word for several moments.

When he spoke it was in his ordinary bland and drawling voice.

"If Linnet likes you better than me, it's all right. Mistakes shouldn't be made in matrimony any more than in business. Anyhow, Bob Sawyer's widow would suit me nearly as well. She isn't pretty, like Linnet, but she owns a half section over in Logan county that joins mine."

Such an unexpected reply! Such a delightfully unromantic reply! Rob burst into a boisterous and ecstatic shout of laughter. He felt he could afford to laugh. He married Linnet.

Rumor says the Sawyer and Dreier half section in Logan county will soon be consolidated in one farm.

And thus, prosaically and pleasantly, culminated in Kansas a modern Mayflower romance.

VALUABLE HINTS IN REGARD TO THE SICK-ROOM.

The sick-room should be on the sunny side of the house and have plenty of windows, and as far as possible, remote from the noises of the house and of the street. If you have coal to put on the fire, bring it wrapped in a paper and lay it on, paper and all. Oil the hinges of creaking doors. Fix wedges in rattling windows. Keep rocking-chairs out of the room. Avoid wearing clothes that rustle or shoes that squeak. Do not whisper.

The first and greatest requisite in a sick-room is ventilation. The best possible arrangement is that of an open window and an open fire-place. If you do not wish a constant fire, keep a lamp burning at the bottom of the chimney to create a draught. Opening a door into a passage or an adjoining room, itself imperfectly aired, is not ventilation. Fresh air may, however, be admitted to the sick-room through an adjoining apartment, first thoroughly ventilated. This is sometimes the best method of procedure. Stationary basins should never be used in the sick-room. The perfect system of house-drainage has yet to be invented, and the danger from leaky and defective traps is so great that the only safe way is to avoid them altogether. If you have any such arrangements in your room which you propose to devote to your invalid, cork up the overflow holes, or, better, stop them with plaster of Paris, and fill the basin with water, which must be changed from time to time, or cover it entirely with a board. No cooking should ever be done in the sick-room. Neither should damp towels or articles of clothing be aired and dried there. All excreta should be promptly removed.

The bed should be in the lightest part of the room, far enough removed from the wall to allow a free circulation of air around it, and to be easily accessible from both sides. It should be so situated that the patient can see out of the window. If you can give him a view from two windows, so much the better. Let the room be as cheerful as possible in its aspect. Flowers are quite permissible. Growing plants are better than cut flowers. The latter must be removed as soon as they cease to be perfectly fresh. There should be no medicine bottles or medical appurtenances of any kind in sight; they belong in the closet, and should be kept there, except when in actual use. A thermometer is indispensable. Hang the thermometer as nearly as possible in the center of the room—at all events, neither against a chimney in use nor the outer wall. The mean temperature should be, unless you have contrary orders from the physician, about 68° Fahrenheit.

The necessity for absolute cleanliness cannot be too strenuously insisted upon. The dust may be removed from the carpet quite effectively and noiselessly by means of a damp cloth wrapped around a broom. Not only for the sake of appearances, but from more directly hygienic considerations, are cleanliness and order to be regarded.

The bed should be low and narrow enough for you easily to reach him from either side. The bedstead should be of iron or brass, with springs of woven wire, permeable by the air in every part. This is the only kind which you can be sure of keeping thoroughly clean. On this should be a hair mattress, never a feather bed. If you have a patient entirely confined to bed, it will add greatly to his comfort if you can give him two beds, each provided with its own complement of sheets, blankets, etc. To prop a patient up with pillows, begin by slipping one as far down as possible against the small of the back. Put the next and succeeding ones each behind the last; this will prevent them from slipping. Whatever food you give, be sure that it is the best of the kind—milk perfectly sweet, eggs above suspicion. Serve the food in as attractive a form as possible. You can at least have the dishes spotlessly clean, and dry on the outside. Have hot thongs hot, and cold ones very

For Rheumatism

sciatica,
rheumatic gout,
neuralgia, dropsy, and
white swelling,

use

Ayer's Sarsaparilla
Cures others, will cure you

cold. Give medicine or stimulant ordered always on time, and measure it accurately. Acquire the habit of always reading the label before you open a bottle. Pour the contents from the unlabeled side. Cork tightly after using, as many drugs lose their virtue upon exposure to the air.—*Popular Science Monthly*.

HINTS WORTH HEEDING.

When a man has his business in perfect working order, and knows that just then a little more or a little less effort on his part will be answered by increased or decreased profits, it is hard for him to believe it wise for him to leave his duties for an hour, even though he is overworked. But one of the highest duties a man owes himself is to give his brain an occasional rest. There is a good deal more in life than simply adding to one's bank account. There is more honor in being a good citizen than in simply growing rich. It is poor policy to be thoroughly posted in all that concerns your business and be out of all knowledge of the great world. A man wants to forget his business occasionally—ought never to carry his cares beyond his store door. A night's respite from business cares will send you back to them with renewed strength and a clearer head.

Do not imagine that your business will go to the dogs if you leave it for a day or two. If you have been thorough with your men—if you have faithful and interested employees—the machine will jog along smoothly enough until you return. We are all apt to flatter ourselves that we are doing what no other person could do; but not infrequently something happens to show us that we are not nearly as indispensable as we imagined—in fact, that a division of labor in our business would be vastly to its advantage. Our subordinates, if left in charge, occasionally, will have a chance to carry out some ideas of their own; these, in a majority of cases, are decided improvements. The man who repulses suggestions from those under him—gives his men no credit for knowing anything beyond the steady routine of their employment—loses much that would be of assistance to him, falls into a rut and stays there, much to his detriment. The man who cannot learn something from contact with other men, whether employees or outsiders, is not a healthy man.

Business is a master that soon makes abject slaves of us if we will; but with a well-established trade one should be master of his business. With probity, industry and economy, almost any man, by well-directed effort, may be prosperous. Whatever progress is made without this foundation is deceptive.—*Maker's Practical Hints*.

THE COURTESIES OF LIFE.

Civility is a very desirable trait of character, and sensible people should make a point of keeping it on hand; civility is one of the Christian graces; it is obligatory upon a lady or gentleman, and it is excellent stock in trade for those who wish to get on in the world. We mean civility, not servility. To cringe and fawn and flatter is despicable. Ostentatious politeness, with a profusion of bows and fine speeches, may be burdensome; but a kind word of greeting, a polite attention, a little act of courtesy is quite another thing. There are people who have a great deal of that pride which gives one the assurance of being "just as good as anybody else, if not a little better," fancy that to care nothing for what others feel, to take the best and be the foremost by dint of pushing, and never on any account to allow another precedence, is to assert themselves properly. This is a great mistake; such conduct, instead of being an evidence of true independence of character, is a mark of ignorance and vulgarity.

In England and in some parts of continental Europe, vulgar people are rude to those beneath them and servile to those above them. In this free country, where there is no titular rank, the ignorant and ill-mannered are sometimes rude to richer or more fashionable people in order to show their independence. This is less ignoble than the European fashion, but it is more detrimental to those who are guilty of it. In business it is very poor policy indeed. Many American tradesmen and mechanics, many milliners and dressmakers have failed because of the rudeness which they supposed would maintain their dignity, and which customers, who themselves would never be uncivil, were unable to endure. Polite attention to a customer's wishes, the little "thank you" on receipt of an order, marked courtesy to every one—in short, the constant observance of the golden rule, has made the fortune of many a man and many a woman. One millionaire in the dry-goods business ascribes his prosperity, in a large degree, to the fact that he never permitted an impertinently "independent" clerk to remain behind his counter. It is an old adage that "manners make the man." They certainly have a good deal to do with the making of a successful man.—*New York Ledger*.

A HUSBAND'S CONFESSION.

I am minded to write a few lines on the little courtesies of life that some of us who are husbands and wives seem to have forgotten or purposely set aside, since the days of our honeymoon. We cling to them tenaciously enough before—yes, we gloried in them. I know I used to tip my hat in the most graceful and courteous manner to my wife when I chanced to meet her on the street before we were married. Sometimes, I confess it with shame, I don't do it now. I used, in those "politer" days, to think that she could not understand any circumstances go up-stairs without a good deal of my arm for support, and now—well, sometimes I bolt on ahead of her and she says reprovingly, "Here, sir, you're a gallant husband, to let me go up-stairs unassisted." Then I always go back and do my duty in this respect.

Wives cling longer than husbands to all the gentle little courtesies that were never forgotten in the halcyon days of their courtship; but they, too, forget at times some of the little things that made them so charming in the eyes of Tom or John or Will. Why shouldn't we say, "I beg your pardon," or "Excuse me," and "Thank you" to each other as well as other men and women? The lack of these little courtesies and kindnesses has much to do with the lack of harmony and happiness in many homes.

ONIONS.

One day I was taken with chills and headache. My quinine box was empty, and I was looking forward to a restless night. In desperation I peeled a raw onion and slowly ate it, then went to bed, with warm feet and an extra quilt. I was asleep in five minutes, and awakened in the morning quite well. Our homely but strong friend will be appreciated in time as a medicine, and if agriculturists would turn their attention to raising a model onion, with the strong scent taken out that taints the breath so unpleasantly, families will be putting such pills in the cellar by the barrel, and the doctors would take to onion farming. The onion acts as a cathartic and diuretic and may help to break up a cold or lessen the bad symptoms. A doctor says:

"I always store a barrel of onions in my cellar in the fall. We have them cooked twice a week, and whoever of the family is threatened with a cold eats some onions raw. If this vegetable were generally eaten raw, there would be no diphtheria, gout, rheumatism, kidney or stomach troubles. I know the young men and women are afraid to eat them. One young man went so far as to say to me: 'If my wife ate onions, I would get a divorce the same day.'"

MACARONI.

Macaroni is a peculiar product of wheat, formerly made only in Italy, and still popularly regarded as a distinguishing diet of the natives of that country. The name is now applied only to the larger pipes, and the smaller ones are known as vermicelli, though there is no real difference between the two except the size of the tubes. The wheat is ground, with the use of heat and moisture, into a sort of meal or paste called semola, from which the bran is excluded. This meal is made into a dough, with water, and is forced through gauges, from which it emerges as macaroni or vermicelli, the process resembling that of lead pipe drawing. Special varieties of wheat, those containing the largest proportion of gluten, are demanded for the successful manufacture of macaroni.

THE WOMAN WHO IS WANTED.

We want women who are going to make the home better, the husband much better, and whose name will be written, not in brass, but in the great life book by Him who knows the heart, and who judges, not severely, but justly. You think there are no women like this? Plenty of them, my friend. But they hang out no sign to tell you of their virtues and their learning, unless you can call a sweet manner, a womanly presence and a sympathetic word a sign. They are to be found everywhere. In the shops, among the workers, and even, strange as it may seem, among the oft-quoted Four Hundred; for to be born fashionable does not always mean to be born bad.—*Boston Saturday Evening Gazette*.

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Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per person. Prevents and cures all diseases. If you can't get it, we send by mail post-paid. One pack, 25c. Five \$1. 214 lb. can \$1.20; cans \$5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c) free with \$1.00 orders or more. L. S. JOHNSON & CO., Boston, Mass.

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AND MAKE IT EASY FOR YOU TO BUY OF US NO MATTER WHERE YOU LIVE.

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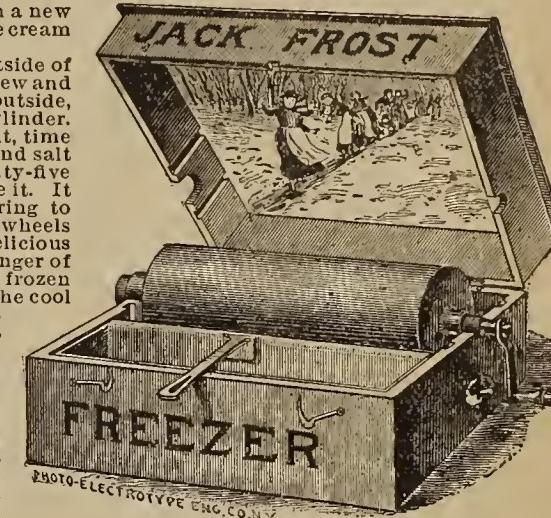
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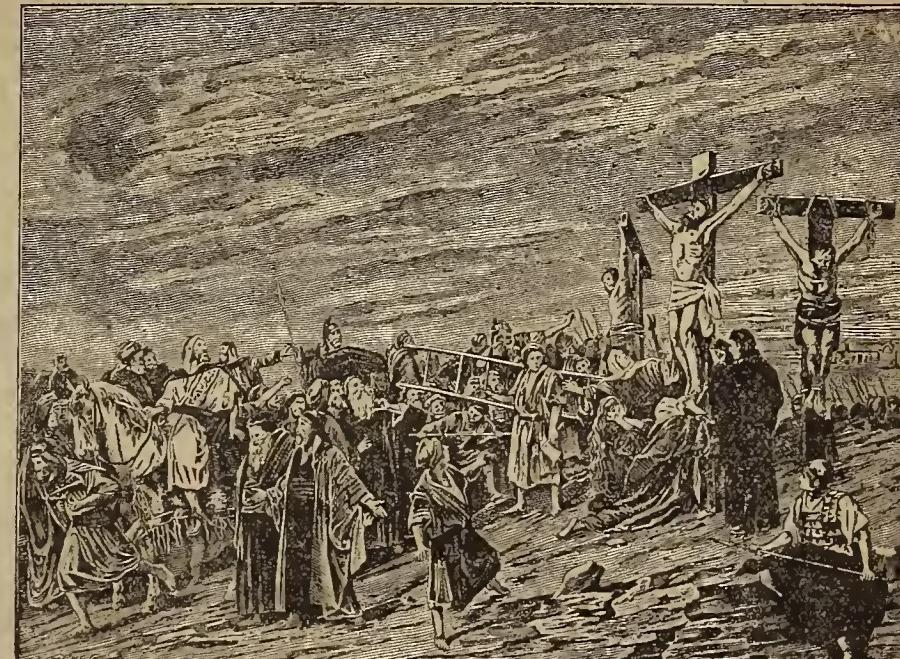
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Our Household.

THE OLD OAKEN BUCKET.

AS REVISED BY A SANITARIAN.

With what anguish of mind I remember my childhood,
Recalled in the light of a knowledge since gained;
The malarious farm, the wet, fungous-grown wildwood,
The chills then contracted that since have remained;
The scum-covered duck-pond, the pig-sty close by it,
The ditch where the sour-smelling horse-drainage fell,
The damp, shaded dwelling, the foul barn-yard nigh it,
But worse than all else was that terrible well
And the old oaken bucket, the mould-crusted bucket,
The moss-covered bucket that hung in the well.

Just think of it! Moss on the vessel that lifted
The water I drank in the days called to mind;

Ere I knew what professors and scientists gifted

In the waters of wells by analysis find:
The rotting wood-fibre, the oxide of iron,
The algae, the frog of unusual size,
The water impure as the verses of Byron,
Are things I remember with tears in my eyes.
And to tell the sad truth—though I shudder to tell it—

I considered that water uncommonly clear,
And often at noon, when I went there to drink it,
I enjoyed it as much as I now enjoy beer.

How ardent I seized it with hands that were grimy!

And quick to the mud-covered bottom it fell!
Then, reeking with nitrates and nitrites, and slimy

With matter organic, it rose from the well.
Oh, had I but realized in time to avoid them,
The dangers that lurked in that pestilent draught—

I'd have tested for organic germs, and destroyed them

With potassium permanganate ere I had quaffed;

Or, perchance, I'd have boiled it and afterward strained it

Through filters of charcoal and gravel combined;

Or, after distilling, condensed and regained it
In potable form, with its filth left behind.

For little I knew of the dread typhoid fever
Which lurked in the water I ventured to drink;

But since I've become a devoted believer
In the teachings of science I shudder to think.

And now, far removed from the scenes I'm describing,

The story for warning to others I tell,
As memory reverts to my youthful imbibing
And I gag at the thought of that horrible well,
And the old oaken bucket, the fungus-grown bucket—

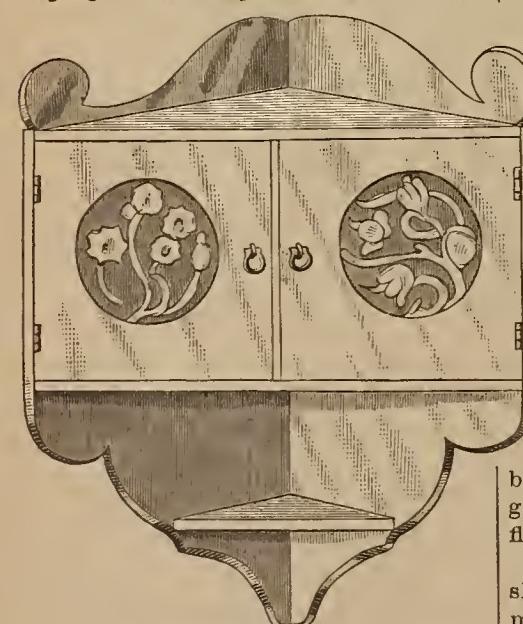
In fact, the slop-bucket—that hung in the well.

—By J. C. Bayles, President N. Y. Board of Health; read at a meeting of the Academy of Medicine.

A BACHELOR'S ROOM.

BY KATE KAUFFMAN.

There are some persons who speak as though when a man wants a home he can hunt up some girl in the matrimonial humor and very quickly set up housekeeping. That may be true if a man



SMALL CORNER CABINET WITH FRET-SAWN PANELS.

thinks getting married is no more serious or important than the purchase of a new suit of clothes; but if he hopes to find in a wife a true companion and a congenial friend, he is as much at the mercy of fate as though he were a woman. Shakspeare

David, the Psalmist, says, "God setteth the solitary in families;" so we see that these wise poets agree with what every man learns by experience; that is, that each must bide his time and await the leading of Providence. But in the meantime, every bachelor may furnish at least one room where he may freely exercise his individual tastes and be lord of all he surveys.

If possible, the bachelor will have two rooms adjoining, or one room with an alcove large enough to hold his bed. We are counting on a place where he spends not only his sleeping hours, but where he goes to find rest, to read, to commune with himself, to indulge his bachelor reveries, and like Ike Marvel, to picture his "dream wife" and "dream children." Such a room should be full of sweetness and light.

Let us begin at the practical things.

plain color, with very richly knotted fringes, are the fashion, and these are good to buy. If well selected as to color, they need never cease to be a useful and beautiful article of household furniture. A rich shade of brown will be tasteful with the other articles we have described; or, if the bachelor has a dash of the savage in him (as the writer confesses she has) a dull, dark red portiere might be admitted. A picture is given to suggest some idea about draping the portiere. Some cord and two pairs of tassels are necessary for this arrangement. The lambrequin at the top may be omitted and a pole with rings may be substituted, if one prefers less elaborate effect. I wonder if the bachelor has any idea what this bit of elegance is likely to cost? Well, not a cent less than ten dollars.

Two rocking-chairs and half a dozen seats of other and various kinds will be

Martha Washington are also welcome faces, though I prefer them in a very simple and not too antiquated style of frame.

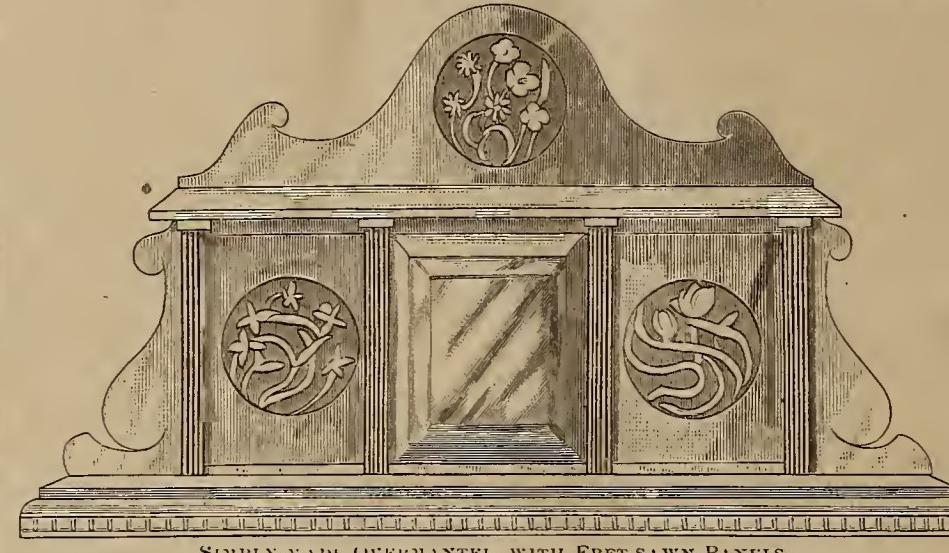
The right kind of bachelor is fond of reading, and will have his favorite poets and historians. He must have a bookcase, and that, too, is one of the articles he can buy with the expectation of having it last for many years. One with a writing-desk will be convenient for all purposes, especially if the lower part has drawers where can be stowed away periodicals.

Now the bachelor's room is complete, and he can spend his leisure time in it, feeling that its influence makes him a better and happier man. He can invite a few of his friends occasionally and have a bachelor's party. He only needs a place to boil the teakettle. It is in weather that demands a fire that an ideal room seems most inviting, but if a blaze is not glowing on the hearth, let the sunshine stream in through the windows. In either illumination we imagine we hear the bachelor exclaim:

"Oh, darling room, my heart's delight,
Dear room, the apple of my sight,
There is no room so exquisite,
No little room so warm and bright,
Wherein to read, wherein to write."

HOME TOPICS.

CAULIFLOWER.—This excellent vegetable is not used nearly as much in this country as it is in others, and is very rarely seen in the farmer's garden or on his table. While it is related to the cabbage, yet it is much more delicate in flavor and more easily digested. If once tried, it is quite sure to become a favorite vegetable. Before cooking cauliflower, the heads should be placed top down in cold salt and water and allowed to soak for an hour. This will drive out any insects that may be among the flowerets. If you wish to boil the head whole, as is a favorite method, wrap it in a piece of cheese-cloth and put it into rapidly boiling, salted water, enough to cover it. A little sweet milk added to the water will tend to keep the cauliflower white. Let it boil from twenty to thirty minutes, according to the size of the head. As soon as a fork will pierce the stem, take it up, drain and serve with a little melted butter poured over it, or, what we think is better, hot, sweet cream, slightly salted. It is also nice served with a tomato sauce



SIMPLY-MADE OVERMANTEL, WITH FRET-SAWN PANELS.

The carpet: Now, I never yet saw a man wholiked any carpet but Brussels. He likes to feel its depth under his heavy footstep; but remember, in your room you can generally wear your slippers, and think of housecleaning time! Two unmarried men, who have roomed together for years, told me their room was carpeted "three deep," their habit being when one carpet became worn to get another, and have the new laid on top of the old! This plan was certainly neither economical nor healthy. A bright, clean-looking, but not gaudy, ingrain carpet will be the best. One with shades of light golden-brown will be pretty, and under it lay several thicknesses of paper. This makes it pleasant to the tread and in winter keeps out the cold.

The walls and ceiling should be of a color to harmonize with the carpet. If you like my suggestion of golden-browns for the floor, have the ceiling papered in a light buff and the walls in a shade darker. Plain papers are the fashion just at present, but they soil very easily. I like posies tumbling over my walls, and if the bachelor's taste is like mine, he will select a paper with some gilt running through it and some pink or dull red flowers. Pink, buff and gold sounds pretty gay, and that is certainly to be recommended; a bachelor's surroundings should be cheerful.

The curtains are next to be considered.

If the house has outside blinds, the windows need only light drapery within. Scrim, at twenty-five cents a yard, will hang in long, graceful folds; two widths, suspended by rings on a pole, will be simple and sufficient. Of course, when the owner of these curtains wishes to view the landscape o'er, he will push aside and muss the thin substance in a thoroughly manly way, but little harm is done, for scrim stands repeated washings and ironings, so these curtains will last till long after the bachelor is married. If the house is without shutters, it will be necessary to add plain, rolling curtains inside, next to the window. These should be of buff holland; they will let in a golden light and keep up the harmony of floor and walls.

Between the two rooms, or at the alcove, shutting off the bedroom proper, a portiere may be hung. This will need heavy material, and here the bachelor need not feel extravagant if he buys a good article, for then he can use it in after years, when he goes to housekeeping as a Benedict Turkoman portieres have long held their place in popular favor. For awhile those with horizontal stripes were much used, later, those with only a handsome border

needed; and then, supposing the bedstead and washstand to be provided and modestly retired in their situation, we are ready to talk about the ornaments and means of recreation.

In glancing through my *Art Amateurs*, these pretty objects decorated with fret-saw work struck me as suitable for a man's room. We women enjoy things which we have made beautiful by means of our needles or paint-brushes, so the bachelor will take especial pride in something which is directly the result of his own handiwork. The overmantel has a looking-glass in it, which recommends it to everybody. The panels are cut by the saw in round designs, which are simplified arrangements of plant forms. The corner cabinet would look well with a small bust on top and a vase on the lowest shelf. The person who gave the pattern of these articles suggested they be made of walnut, oak, or other dark wood and be simply oiled, not polished. He spoke of "a very uncommon and yet beautiful treatment, which is to use such a wood as birch and stain it grass-green with a transparent dye." He spoke also of staining the wood black, which is not so uncommon. Another idea was to saw the ornaments from thin sheets of brass or copper, and by means of a few artistic scratches express the veins of the leaves or overlapping petals.

Pictures come next on the list of ornaments, and they generally pretty clearly indicate the character of their owner. Nothing is a better index to a bachelor's true inwardness. He may not understand high art, but it is to be hoped his collection will include only "whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good repute." Even in inexpensive art there are fine pictures of horses, dogs and cattle, sometimes copies of some of the world's masterpieces. The pure face of a beautiful woman or child must always exert a refining influence. Bits of landscape, or merry scenes of indoor or outdoor sport, add a liveliness and variety. One can hardly speak on such subjects without giving one's personal taste; so I will say in passing, that as biography is my favorite reading, so the portraits of great and good persons are always exceedingly interesting to me. The house which shows me Goethe, Schiller, Mozart, has gained my good will at first glance. John Wan-



PORTIERE FOR BACHELOR'S ROOM.

poured around, not over, the head after it is in the dish for the table. The tomato sauce is simply stewed tomatoes seasoned, strained and thickened with a tablespoonful of flour. If curry powder is liked, a small half teaspoonful of it may be added to the tomato sauce.

Our Sunday Afternoon.

FORGIVE ME.

WHEN we stand before the living
With a bitter sense of wrong,
Stern and cold and unforgiving,
'Mid a tide of passion strong.
With a kind of proud complaisance
We but see their blamable part,
And we go out from their presence
With a hard, nnyielding heart.

When beside our dead we're kneeling,
In our agony we cry,
Sobbing, with repentant feeling,
"Oh, forgive me, it was I!"
Father, save us from the weeping,
From the hopeless cry that knells
Over loved ones that are sleeping,
With lips mute in death's farewells.

POOR MEMORIES.

ABAD memory is a very bad thing. Some persons have very peculiar memories; they will forget the sermon, text and everything the minister uttered; they will even forget the time of meeting, and when anything is said they will complain of their defective memories. An old grudge, however, is easily remembered; or if some one is owing them they don't forget that. Their memories are much like a barn that will hold stubble and brush and bog hay until it is full, but there is no place in it for a sheaf of wheat or a load of hay.

How remarkable it is that persons find it so hard to remember gospel, law and dnty, while it is so easy to remember gossip, the price of beans and potatoes, idle tales, vain conversations and foolish jests. Has not the devil got a hand in this? "Satan cometh immediately and taketh away the word that was sown in their hearts." Mark 4:15. It is a fearful thing to know that Satan has much to do in filling up the minds and hearts of some individuals and stealing away what good there is in some persons.

Yes, it is a fearful thing to know that Satan is stealing and catching away from us the words of everlasting life which alone can save us. "Therefore we ought to give the more earnest heed to the things which we have heard, lest at any time we let them slip. For if the word spoken by angels was steadfast, and every transgression and disobedience received a just recompence of reward, how shall we escape if we neglect so great a salvation; which at the first began to be spoken by the Lord, and was confirmed unto us by them that heard him." Heb. 2:1, 3.

"Lest at any time we let them slip" (or run out as leaking vessels). A dried-up, leaky vessel is in a bad condition, and a good way to treat such a vessel is to put it where the water will steadily flow into it, and finally it will hold all right. The way to correct poor gospel memories is to place ourselves under the steady flow of God's word, and finally we will be filled.

IF TEN, WHY NOT ALL?

According to the Moslem creed, ten animals are admitted into paradise besides man: 1. The dog, Kratine, of the Seven Sleepers of Ephesus. 2. Balaam's ass, which reproved the disobedient prophet. 3. Solomon's ant, which reproves the sluggard. 4. Jonah's whale. 5. The ram of Ismael, caught by the horns and offered in sacrifice instead of Isaac. 7. The camel of Saleb. 8. The cuckoo of Belkis. 9. The ox of Moses. 10. The animal called Al Borak, which conveyed Mahomet to heaven. The following are also added: The ass which our Savior rode into Jerusalem and the ass which the queen of Sheba rode when she visited Solomon.

COOL RETREATS.

There is Denver, cool, clear, invlting; Colorado Sprigs, the home-like Manitou, the abode of the gods; Idaho Springs and the famous baths, and Boulder, a lovely resting place at the foot of the mountains. Garfield Beach, on Great Salt Lake, as a bathing resort is not equalled in this or any other country; nature's champagne flows the year round at Soda Springs, Idaho; the Columbia river, broad and grand, is without a peer for a summer tour, while the beauties of Cœur d'Alene lake and the splendid new region of the Pacific Northwest opens up a line of tourist travel unsurpassed in America. You can have your choice of climate, any kind of sport, and every condition of superb scenery on the manifold lines of the Union Pacific System.

WORTHY OF CONSIDERATION.

There is what might fairly be called a "struggle for existence" between the adult world and the world of childhood. The grown folk find their existence hampered by what they suppose to be the unnecessary and inexcusable annoyances from the presence of children. The children find their existence hampered by what they see to be an inexcusably unfair attitude toward them; for, while children often recognize the rights of their superiors over them, they also recognize more often than they are supposed to the broader view of rights between man and man. They recognize such a thing as "fair play" entirely apart from considerations of age or size. A good mother became conscious of the fact that the conquering of self was one of the first requisites to the conquering of her children, through the pathetic appeal from her little boy.

"Mamma," said he, "when you talk that way to me, I think I would better just go away until you get right again. If I could take you up in my arms and pet you, as you do me when I feel cross, you would soon feel better, and not scold any more. But I'm not big enough to do that, and so I think I would better just go away from you a little while." Did ever a parent apprehend a child's need better than he apprehended his mother's need? Was ever the cause of affronted and abused childhood pleaded with a simpler, more innocent, yet more searching pathos than that? If the child cannot punish you for your wrongs against him, neither can he take you up in his arms and soothe you into a better spirit, and so help you to conquer yourself, whether or not it helps him. The child realizes all this. Do you?—S. S. Times.

THE MISSION OF FLOWERS.

In one of the cells of the state prison in an eastern state there was once confined a man who had grown old in sin. He had at last committed some crime which had shut him up in this place for a term of years. He was a bold, bad man, whose heart seemed hardened to all good influences. Men with large, kind hearts visited the prison and talked with him, but he was not moved by them. Benevolent women with Christian zeal read the Bible in his hearing, and tried to help him with words of counsel and encouragement, but to no purpose. He says of himself that these efforts on his behalf did not soften his hard spirit, but, on the contrary, he felt fiercer than ever toward the good and the right.

One day there came to the prison a woman of few words. As she passed this man's cell she gave into his hand a beautiful bouquet. Five minutes after she had gone he could not tell that she had said anything; he could not remember how she looked, but the flowers had caught his eye. What it was about the pure, sweet things that had attracted his attention he never attempts to explain, but something about them touched his heart, his feelings overcame him and he wept. Thoughts of the past followed each other rapidly, and at last came the resolve to be a better man. From that time his reformation began, and now, respected and honored by the citizens of his native city, he daily goes among them as a servant of the public, in His name.

TRUE FRIENDSHIP.

No gift to man is better than a good friend, and none is so generally in reach of everybody. It is in men's power to make their own friends, and only those thus made are worth having. To a superficial observer, friends often come as they are attracted by wealth, fame or beauty. These are all evanescent, and so is the friendship which is attracted by them. The true friendship that will last is founded on respect and affection, based on the character of the recipient of it. The character which draws friends is the best possible guarantee of success in life; by which is, of course, not meant the possession of those qualities that attract the self-seeking, and which nearly always results in failure.

"An American Girl in London" is the title of the new book now meeting with great favor from the public. We offer a copy free to every one subscribing or renewing during August. See our page of great offers. Page 363.

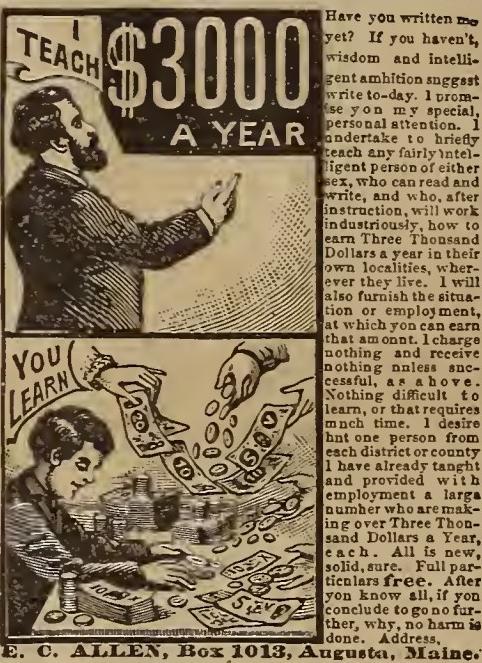
A BIT OF TRUE POLITENESS.

Some time ago a friend of the writer gave a dinner, to which a young man, his wife and their little child were invited. The child was a very precocious, bashful and intensely sensitive little one. During the dinner she upset a glass of water upon the table-cloth, and hastily noticing the looks in her direction, her little lip quivered and her eyes filled with tears. At that moment my friend, who gave the dinner, knocked over his own glass with a crash that drew every eye in his direction. He laughed over the matter and said it made no difference, etc., and succeeded in withdrawing the attention from the child, who soon smiled again. That I consider to have been the perfection of politeness.

MAY BE GOOD THEORETICALLY.

A writer once said that the best way to get on in the world is: To say nothing, know nothing; lend nothing, owe nothing; beg nothing, steal nothing; give nothing, feel nothing; prize nothing, scorn nothing; hope nothing, mourn nothing; waste nothing, bet nothing.

That may be all good in theory, but it is scarcely practicable. If a man says nothing he is looked upon as a know-nothing; if he lends nothing he is considered mean; if he begs or steals nothing he is not up to date; if he gives nothing he is taken for a quadruped with bristles; if he prizes nothing people will say he is a phlegmatic dolt; if he hopes nothing he is a pessimistic misanthrope, and if he wastes nothing his tradesmen will cease to call in the morning for his orders.



E. C. ALLEN, Box 1013, Augusta, Maine.

All other lamps make more or less smell—the "Pittsburgh" none.

The reason is: the combustion is perfect in the "Pittsburgh;" not quite in others.

As might be expected, the "Pittsburgh" burns less oil and gives more light than any other central-draft lamp.

The reason why the "Pittsburgh," new this year, is taking the lead already is its cleanliness; it is the cleanest of lamps; it almost keeps itself clean. It has no dirt-pocket; has no need of a dirt-pocket.

A common servant, or even a child, can take care of it. Send for a primer.

Pittsburgh, Pa. PITTSBURGH BRASS CO.



Mention this paper when you write.



Mention this paper when you write.



FOR YOU

MR. PARMELEE sold in three days, 116 Copper Coins for \$8,915; 29 Silver Coins for \$4,713; 4 Gold Coins for \$1,760. And we can prove that others have done nearly as well. Coin Collecting Pays Big. If you have any Old Coins or proofs coined before 1857, save them, as they may be worth a fortune. Illustrated circulars on rare coins free at office or mailed for two stamps.

Numismatic Bank, Boston, Mass.



Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

495 \$18K

GOLD PLATED

WARRANTED GENUINE, ONE YEAR TRIAL FREE.

Acknowledged by all to be the most perfect substitute for a solid gold watch ever placed on the market for the money. Read the testimonials in our mammoth catalogue, which is sent free with each watch. The watch is hunting style, double cased and double plated, and equals in appearance to many watches retailed as high as \$100.00.

The movement is our justly celebrated chronometer. Over 600,000 have been sold and acknowledged by all to be one of the best time-keepers ever placed on the market at any price.

With each watch we send a printed guarantee, which gives you the privilege of returning it at any time within one year if it does not give entire satisfaction. Cut this out and send it with your order, and we will ship the watch to you by express C.O.D. You examine it at the express office, and if it is satisfactory pay the agent \$4.95 and express charges and it is yours otherwise you pay nothing and it will be returned at our expense. THE NATIONAL MFG & IMPORTING CO., 828 Dearborn St., Chicago.

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Our farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

THE FARMER'S HENS.

THE breeder of thoroughbreds is often at a loss to account for the fact that the scrub hens of some careless farmer lay more eggs than do the prize-winners of some show-room. The difficulty is not with the breed, however, for the pure-bred fowls will lay more eggs than the scrubs, and pay a better profit. The fact is that a great many so-called breeders, though familiar with the "points" of the breeds, know very little about the proper care of fowls. They write long articles showing how the farmers neglect their fowls while the breeders are feeding well. Both classes—the breeders and farmers—have much room for improvement. The breeder makes his hens too fat, does not compel them to work and scratch, while the farmer leaves his hens to work or starve; but the farmer is nearer right than the breeder. If eggs are desired, it is better to feed the hens sparingly than to closely confine them and make them as fat as seals, as they simply entail an expense and give no profit, while the half-starved hen entails no expense at all, nor does she give a profit to her owner.

But the fact is that the farmer's hens seldom lay in winter unless in the possession of those who care for them. It is in the spring, when vegetation is appearing and the frost is out of the ground, so that the hens can find food in plenty, that they begin to lay, and when the breeder does not get eggs at the same time it is because his hens are confined, must subsist on grain, and have no opportunity to live in a manner somewhat approaching the natural conditions best conducive to thrift and production of eggs.

It is a mistake to suppose that all farmers' hens are scrubs. They may not be pure bred, but they may be well bred. An inspection of a flock on any well-regulated farm will show that the hens are crosses, or possess quite a proportion of Leghorn, Brahma or Plymouth Rock blood, and are perhaps harder than the inbred flock of some breeder, who may have for years been discarding his strongest and most vigorous birds in order to retain those that possess some useless point that fits them for the show-room only. A little white spot, no larger than a pea, will cause the breeder to discard a vigorous Brown Leghorn male and retain a weaker one that has a perfect color of the wing. This mode of selection by the breeder is not conducive to production, nor should he wonder if the farmer's hens, that are probably of good crosses, and which have all the advantages of liberty, should prove superior to the show-room pets.

Farmers, however, can have eggs in winter, and can give good care to the hens. While they are correct in compelling the hens to hunt for a share of their food, yet they should not overlook the fact that there are periods when the hens must derive all their food from the farmer, and by using good breeds, or crosses, the farmer need not look to the spring and summer seasons only, for a flock of vigorous hens should lay during the entire year, except when they are moulting.

FALL PULLETS.

A late-hatched pullet sometimes makes an excellent layer in the spring, but it depends upon her breeding how soon she will begin to lay. Some pullets mature at six months of age, while others require nearly a year to complete their growth. The laying pullets should be the first ones

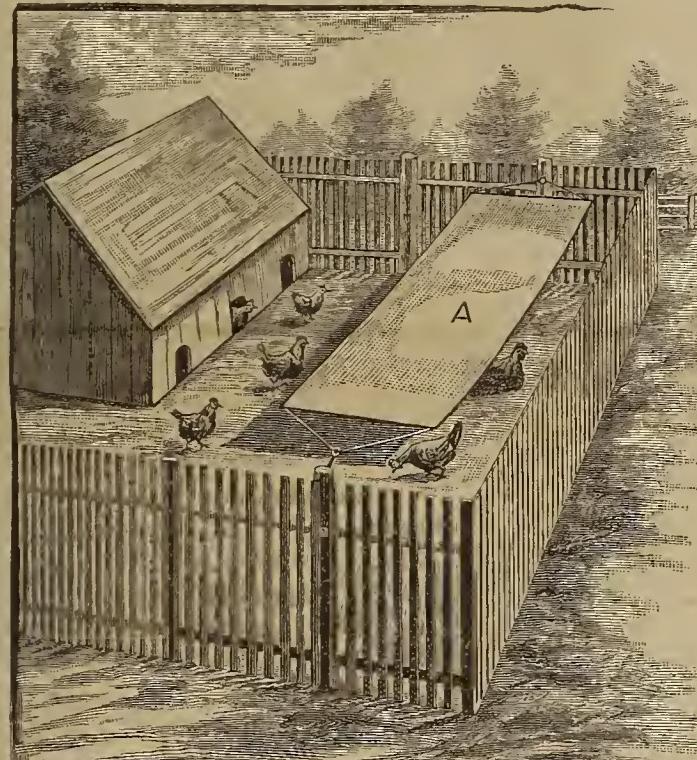
hatched, and as they are usually of the Brahma or Cochin breeds, no difficulty is experienced in fixing the proper period for hatching the slow-maturing and quick-growing pullets. Late hatching has its advantages in the fact that late pullets will begin laying in the spring, and they will continue to lay later the next summer and fall, for the reason that they will not moult until nearly all of the early pullets have finished. They, therefore, fill up a gap at a time of the year when the prices of eggs are beginning to increase. If a pullet does not begin to lay before cold weather approaches she will seldom begin before spring. No matter how well the hens and pullets may be kept, the winter season influences them in laying, to a certain extent. The fall-hatched pullet may not give promise of paying her expenses when young, but she will begin laying so early in the spring, and grow so fast about the first of the year, as to occasion surprise, though she may never be very large in size.

SELLING CHOICE EGGS.

In the leading eastern markets eggs now sell at eighteen cents per dozen, wholesale, for choice, but prices for some kinds are much lower. To secure good prices, do not sell any but those that are fresh, and aim to have them uniform in size and color. Eggs of promiscuous size and color will always fail to bring the top prices. A little care in aiming to add to the attractiveness of an article is always repaid, and eggs are no exception to the rule.

SHADE IN THE YARD.

During the very warm days the hens often suffer in shadeless yards. The illus-



SHADE IN THE POULTRY-YARD.

tration is intended to show how a cheap and simple contrivance may be arranged to provide shade, as well as protect partially against showers. A piece of muslin a yard or more wide, and of any length, may be fastened to posts across the yard. The muslin (A) has a cross-piece at each end (which may be a lath) to which the muslin is tacked or wrapped and sewed, a piece of strong twine being used to attach the lath to the fence-post. As the illustration shows the method at a glance, any extended explanation is unnecessary.

PURE BREEDS—BUYING STOCK.

Now, that the breeders are overstocked, is the time to buy from them. Never buy pure breeds of fowls in the spring, as they are then scarce, and prices are high. It is almost impossible to procure pullets in the spring, as the majority of poultrymen sell off nearly all of their surplus before winter comes on, in order to avoid keeping them, and to secure plenty of room for their regular breeding stock; hence, they will sell at a reduction from now to December. It is a rule to buy eggs in the spring and fowls in the fall. The cheapest plan is to buy the fowls, as they will enable you to become well stocked the first season, and if procured now the cost will be materially lessened.

FOR A DISORDERED LIVER try BEECHAM'S PILLS.

Handsome presents to all who subscribe or renew during August. See page 363.

DO EGGS PAY AT LOW PRICES?

When eggs are as low as ten cents a dozen, do they pay? This is a question that often comes up for discussion. In olden times, before the railroads had reached all points, our ancestors were content with six cents per dozen for eggs. Whether eggs pay or not depends on how much they cost. We do not believe that a farmer should feed his hens at all in the summer season, if they have a range. Allow a flock to have access to the stubble of the wheat field, or where grass is plentiful, and they will secure all the food required, and more than they need, and of a variety. When insects, grass and waste grain can be converted into eggs by the hens, there is simply a saving of that which might otherwise be wasted. We are partial to the active and industrious hen. She will cost her owner nothing in summer, and the eggs can be sold low and yet give a profit. The hen needs no feed for five months in the year, and fifty pounds of grain will carry her over the cold season, at which time eggs are high. In warm climates one half the grain only is needed. The true way to keep fowls is to allow them to forage in an orchard. Poultry and fruit make an excellent combination.

ASSORTING THE HENS.

It is one of the most important matters that hens be separated according to the requirements. If you have a flock of hens, and some of them are laying while others are unproductive, separate the layers from the others, or take out the extra fat hens. This is especially necessary on those farms where the hens are confined to a limited area. The laying hens and the fattening hens do not require the same food. For instance, a hen that is intended for market may be allowed all the grain she can consume, but the laying hen will require a more nitrogenous diet, such as meat, and if they are together the laying hens may not receive the food intended for them, as the others will also take a portion. There is also a difference in hens in another respect—age. The old hens will always domineer over the younger. It is best to have a flock of the same breed and age. The layers should never be with the non-layers. Always observe the condition of each hen, if possible, and feed according to circumstances, as there is no rule that can be followed in feeding.

DAMP NESTS.

It is supposed that a damp nest is better than a dry one. This belief is not correct. In the summer a hen prefers a cool nest. In the winter her nest should be warm. If the hens prefer nests on the ground, that are covered with brush, it is not because they seek damp locations, or desire such, but because such secluded places are cooler and more comfortable. A close poultry-house in the summer season, if the roof is low, will often reach a temperature almost unbearable during the middle of the day, and the nests are avoided by the hens for that reason. In the winter it may be noticed that the hens prefer the poultry-house, and seldom seek nests outside.

BRAN AS POULTRY FOOD.

A mess of bran is always beneficial. Bran contains more phosphates and mineral matter than ground grain, and it also assists in regulating the bowels, especially when a small quantity of linseed meal is given with it, but in the summer season a mess three times a week may be allowed only. It may be fed by scalding it and feeding it in a trough, or it may be sprinkled over potatoes or turnips, cooked. No other grain food need be given if bran is used in the summer season, if the fowls have a range. In fact, no grain is necessary at all; but should such food be given, let it be bran.

THE SILO FOR POULTRY.

Hens will eat ensilage. That fact is well known to those who have used it for their poultry. If they will eat corn ensilage they will also eat that made from grass. In storing ensilage the wants of the hens should not be overlooked. A large hogstooth, with green food pressed down with a pressure sufficient to exclude the air, has been pronounced an excellent method by those who have tried it, but in using such materials the best results are obtained by cutting the green food when it is nearly mature, instead of using that which is young and watery.

CROSSING FOR RESULTS.

If you have a lot of large, clumsy, lazy hens, and wish to improve your flock by crossing, select a male from some breed that is known to be active and which forage well. For crossing on large Brahma or Cochin hens there is nothing superior to the Leghorn, and the pullets from such a cross should be mated with Plymouth Rock or Wyandotte males. If the hens are very small in size, and a cross is desired for them, a Cochin male with Leghorn hens is excellent, and the pullets from such a cross will produce excellent layers and table fowls if mated with a Wyandotte or Houdan male.

A PLOT OF RYE.

As soon as the fall comes lay off a plot for rye, to be used as green food for poultry after other green food has ceased to grow. It is not necessary to turn the hens on the rye, as it may be cut and fed to them, and it will also provide green food early in the spring, before anything else in the shape of green food puts in an appearance. Use plenty of seed, as the thicker the rye the better. Only a small plot will answer well.

LAMENESS IN YOUNG TURKEYS.

At this season many complaints are made that young turkeys become lame and swell at the joints. The difficulty is due, mostly, to the high roosting places, the young turkeys striking the ground too heavily. Old turkeys are not so liable to be injured, as they are matured, but the rapid-growing young ones are too weak in the legs to endure the constant strain upon them when they jump from high perches.

CRACKS IN THE WALLS.

Though this is the summer season, occasionally a north-east storm puts in an appearance, when a draught from that quarter may cause roup in the flock. It will do the fowls no harm to be in an open shed, facing the south, but a current of air coming through a crack in the wall, on a damp and disagreeable day, may cause disease to appear in the healthiest of flocks.

INQUIRIES ANSWERED.

Long Lice.—Mrs. D. S., Pikeville, Tenn. "My chickens have the long lice on them and are dying as though they had cholera. They roost outside. What can I do for them?"

REPLY:—See inquiry and reply headed "Lice."—J. E. C., Rodney, Miss., in this column.

Difficulty with Chicks.—W. D. G., Cropseyville, N. Y. "I have about fifty chicks that are blind, weak in the legs and stagger."

REPLY:—Probably due to lack of warmth at night and exposure to overhead draughts, but it would not be out of place to closely examine for the large, gray lice.

Incubators.—E. W. S., Deer Park, Ont. "Is there an incubator made that gives satisfaction?"

REPLY:—Incubators, if rightly managed, usually give satisfaction, but some experience is necessary. Nearly all kinds now offered will satisfy the operators. It is difficult to attempt to select the best.

Black Comb.—M. G., Quebec, Canada. "What is black comb, or grayish comb, and the remedy?"

REPLY:—Black color of the comb simply indicates illness of some kind, and it is not a disease of itself. The same is true of pale or gray combs. When a fowl is unwell the comb always changes color, a healthy fowl having a red comb.

Gapes.—J. D., Minersville, Pa. "Can you give me any cure for the gapes in chicks?"

REPLY:—Strip a feather, leaving a tuft on the end, insert it in the wind-pipe, give a twist and withdraw it. The method is the only sure one, but good results may sometimes be obtained by giving a drop of spirits of turpentine on a bread crumb.

Lice.—J. E. C., Rodney, Miss. "My chickens droop for awhile and finally die. They eat their feathers, have sore eyes and scratch their heads, the combs being pale."

REPLY:—Anoint heads and necks with sweet oil and rub it well into the skin. Dust under the wings and into the feathers with fresh insect powder. The difficulty is due to both the large gray lice and the small red mites.

BEECHAM'S PILLS
(THE GREAT ENGLISH REMEDY.)
Cure BILIOUS and
Nervous ILLS.
25cts. a Box.
OF ALL DRUGGISTS.

Milkmen Creamerymen and Dairymen can keep Milk and Cream fresh a week WITHOUT USING ICE. Tasteless, odorless, inexpensive. A necessity to every creamery, dairy and milkman. Sample, sufficient to make convincing test mailed for 10c. The Preserving Mfg Co., 10 Cedar St., New York.

MILK PRESERVATIVE.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate reply or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Millet.—E. G. S., Malvern, Ill. Cut your millet when it is in bloom. Millet on rich, suitable land, sown thickly, if cut early makes excellent hay. If cut after the seed is ripe it is said to be unhealthy for horses.

Weeds.—H. T. C., Rushville, Ind. Leaves are the lungs of plants, and plants cannot live without them; hence, cultivation that destroys the tops will destroy the roots in time. If ground is very foul, let it lie fallow one summer and cultivate it very frequently. The seed will germinate and the young plants will be destroyed. Clover is a good crop to raise on land infested with weeds. It will smother them down.

Best Time to Plant Evergreens.—A. W., Williamstown, Mass., writes: "Would you kindly state through your columns, the best time of the year to transplant Austrian and Scotch pines, as also Norway spruce and hemlock? I have found spring and autumn planting succeed badly, but have found it better about August or September, when the season's new wood has just finished growing and ripened a little. However, I shall be glad to have the experience of others, through your valuable paper."

Celery-Caterpillar.—G. C. T., Perry, Mich., writes: "Find inclosed a specimen of the worms that are eating my carrots. They are very numerous. I have picked them all off at night and next morning there will be two or three on a single plant. When they are touched they throw out a pair of yellow 'horns' about one fourth of an inch long, and eject a peculiar odor."

REPLY:—The worm you send for name is a celery-caterpillar, which feeds upon the foliage of carrots as well as celery, parsnips, parsley, etc. Hand-picking and dusting with insect powder are the remedies recommended. The disagreeable odor emitted from the yellow horns repels birds and poultry.

Stump-Machine.—R. T., Matsyui, B. C., writes: "I would like to get a description of a home-made stump-machne. I want one, the wood part of which could be made at home, and the iron part at any blacksmith's shop."

REPLY:—The simplest home-made stump-machine that we know of consists of a strong pole twelve or fourteen feet long, and an extra heavy chain. After digging around the stump and cutting off the side roots, hook one end of the chain over a side root, give it a turn around the stump, and fasten the other end to the pole. With a good, steady team of horses hitched to the other end of the pole, you can twist out all except the largest and greenest stumps.

Cider.—J. M. W., Monitor, W. Va. For making the choicest kind of cider, select sound, ripe apples. Make the cider in cool, fall weather. Carefully filter it as it runs from the press; every particle of pomace should be removed. Put the cider in a sound, sweet cask, and keep it in a cool place. Insert a small, rubber tube in the bung, which should fit tightly. Let the tube bend over and the end hang in a vessel of water. The carbonic acid gas formed in the cider will pass off through the tube, no oxygen will be admitted, and fermentation will be prevented. After standing awhile in the cask, the cider should be drawn off and bottled, or put in small, stone jugs. Seal the corks carefully, and keep the bottles or jugs in a cool, dry place.

Cultivating Melons.—A. N. O., Charles-tou, W. Va., writes: "I have worked my melons twice, and the ground is well pulverized, and free from weeds and grass. How often should the ground be stirred, and when should cultivation cease? How many vines should be left to the hill with hills eight feet apart?"

REPLY BY JOSEPH:—Cultivate and hoe as often as you can afford, at any rate enough to keep the ground mellow and free from weed-growth until the vines have well started to run, and are in danger of being torn by the cultivator. Then cease cultivation, and thereafter only pull up by hand what weeds may make their appearance in the patch. Two or three good plants to the hill will be sufficient, and better than half a dozen.

Clubroot in Cabbage.—H. S. H., Tracy, Ohio, writes: "We lose many of our cabbages by what is known as clubroot or clubfoot. The roots of the affected plants are full of white knots. What is the remedy?"

REPLY BY JOSEPH:—Cabbages are quite liable to be affected by clubroot if grown in succession on same piece of ground. To prevent it, we have only to avoid such land, and select a new piece for every crop. It is never safe to plant cabbage after cabbage, or other members of the same family (cauliflower, turnip). Rotation will prevent many ills. Our soil containing plenty of lime the disease is seldom troublesome. If I thought it desirable to follow cabbage after cabbage, I would give the roots of the growing crop, while yet small, a thorough soaking, another later, if needed, with strong, caustic lime-water, or a solution of kainit or muriate of potash, and thus fight both clubroot and maggot.

Pasture.—E. M. C., Persia, Iowa, writes: "What is best to seed old ground with for pasture, and when should the seed be sown?"

REPLY:—There are many advantages in the rotation of crops; where this is not practicable it is best to make a permanent pasture and take care of it. If you seed your old ground to wheat this fall, sow blue-grass and timothy. In the spring sow red clover, alsike clover and orchard-grass. After harvest do not turn your stock on, but give the grasses and clovers a chance to get a good start. The following year the clovers will predominate, but they will be gradually superseded until blue-grass has almost complete possession. As it takes three or four years for the blue-grass to make a thick sward, the clovers and timothy will furnish good pasture in the meantime. It is not necessary to sow wheat at all to get the land in grass. Plow, harrow and prepare your land thoroughly this summer, sow the timothy, orchard-grass and blue-grass early in the fall, and the clovers early in the spring. This ought to give you excellent pasture next summer. After a permanent blue-grass pasture is established, it will be greatly benefited by a harrowing early each spring and an annual top-dressing of fine compost, or some good commercial fertilizer. Good care of permanent pasture-land will double its productivity.

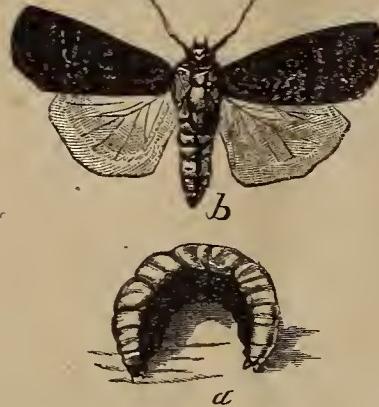
Sow a mixture of grasses and clovers, and let the fittest survive; on your land it will probably be blue-grass.

Remedy for Cabbage-Worm.—A. A. M., Norfolk, Va., writes: "Is there a sure preventive of the cabbage-worm, which is the cause of failure of fall cabbage in this locality?"

REPLY BY JOSEPH:—Planting in a corn field; that is, planting in a patch surrounded by corn, as inquirer suggests, may prove a preventive. We have also sure remedies for the pest. One, perhaps the cheapest, is the kerosene emulsion, formula of which has been repeatedly given in these columns; yet I consider good, fresh insect powder, like the one known under the name "buhach," as by far the most convenient in the home garden. The kerosene emulsion should be applied in a forcible spray; buhach elther in solution, as a spray, or in dust form. It can be mixed with from four to perhaps eight times its bulk of flour or air-slacked lime, and then blown into the heart of the plant with a powder-gnn or bellows. It has a certain and immediate effect, especially if applied in morning or evening.

Cabbage Cut-worms.—A. J. S., St. Maries, Idaho, asks for a description of the common garden cut-worm moth.

The accompanying illustrations, from Weed's



"Insects and Insecticides," show the larva, a, and the moth, b, of the variegated cut-worm, natural size.

VETERINARY.

*Conducted by Dr. H. J. Detmers.**
Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two WEEKS before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Ringbone.—M. F., Rosedale, Mo., writes: "I have a mare four years old that has a ringbone on her front foot. It commenced to raise about a year ago. Can it be cured?"

ANSWER:—You will find a description of the treatment of spavin and ringbone in one of the November numbers. For reasons frequently stated, a treatment of those diseases is very seldom successful until the fly season has past. Therefore, wait until then.

Pruritus.—G. B., Champion, Neb., writes: "Will you give a remedy for the Texas itch? Is it a disease something of that nature? The horse first becomes mangy and then breaks out in red-looking sores. He rubs and scratches so I can hardly work or do anything with him."

ANSWER:—What you call Texas itch is probably a case of pruritus. For treatment, see FARM AND FIRESIDE of July 1.

Umbilical Hernia.—A. L. W., Marston, S. Dak., writes: "Will you inform me what is best to do for my two and one half-month-old colt? It has a breach just back of its navel almost as large as a hen's egg. Can I cure it?"

ANSWER:—It will be tolerable safe to do nothing until the colt is older. When the same is a year old and the hernia has not disappeared, it will be time to perform the necessary operation. Write again next May for instructions.

Cribber.—G. M. R., Maysville, W. Va., writes: "I have a fine two-year-old filly that cribs. I have tried several cures, but none have helped. Can you tell me if there is any cure?"

ANSWER:—It is impossible to break an accomplished cribber of its bad habit. Only when an animal shows the first signs of a tendency to become a cribber, steady employment—plenty of work every day—constitutes a preventive. For further information see recent numbers of FARM AND FIRESIDE.

Foot-rot.—W. C. B., East Palestine, Ohio, writes: "There is a disease among cows here which seems to affect cows which are pastured on a piece of ground containing several swamps. The disease seems to break out between the hoofs and legs. The legs swell and the cow gets lame. After a few days the sores begin to matter and the hoof gets rotten, something like the rot among sheep."

ANSWER:—Keep your cows clean and on dry ground, out of the swamps, and then apply to the sores, three times a day, a mixture of sub-acetate of lead, one part, and pure olive or cotton-seed oil three parts, and the trouble will soon cease. The disease is not contagious, but infectious.

Swelling of the Septum.—J. E., Broken Bow, Neb., writes: "Will you please tell me what ails my colt and the remedy for same? He is a two-year-old gelding. The partition between his nostrils is swelled badly, being about two inches thick and filling up both nostrils. He wheezes very badly, having to force the air through in breathing. He runs slightly at the nose a light-colored, thick matter. Has been in this same condition about three months."

ANSWER:—What you describe is a serious case, and although it may not be glaucoma, it surely requires an examination by a competent veterinarian. I therefore have to advise you to consult one or to inform your state veterinarian.

Probably a Condylomatous Papilloma.—A. R. B., Headsville, W. Va., writes: "My yearling colt has something the matter with its nose, between the nostril and the lip. There is a spot at the end of one of her nostrils as large as a silver half dollar, which is raised up to the thickness of a dollar piece, and this is covered with oval, red pimples. Also three or four on the edge of her lower lip, about half the size of a wheat grain, and several others scattered underneath her lower lip."

ANSWER:—What you describe seems to be a condylomatous papilloma. It surely is not due to poisoning. The treatment must be a surgical one, and if a competent veterinarian is available, it would be best to let him apply the treatment necessary. If there is none to be had, you may get a concentrated solution

of corrosive sublimate in very strong (almost absolute) alcohol and apply it, very carefully, of course, once a day to the morbid tissue, but to nothing else. The application is best made by means of a suitable camel's-hair pencil. Each application will leave a thin, white coat of corrosive sublimate on the morbid growth. The applications, for obvious reasons, ought to be made after and not before a meal. The solution should be labeled "Strong poison."

Unable to Rise.—S. E. W., Ross, Wis., writes: "I have a calf that cannot get up. There seems to be something the matter with its legs. It can stand, run and jump and play as well as any calf when helped up. It eats heartily and is fat. When it tries to get up its front legs sprawl out and it is unable to rise, but with a little help it is all right."

ANSWER:—The infirmity of your calf may be due to partial paralysis; it is, however, also possible that it is caused by an arrested development of some muscles. Your description does not furnish sufficient data to form a definite diagnosis. In either case the prospect of a cure is very slim. Hence, the best you can do is to convert your calf into veal.

Wetting Horses' Feet.—H. H., Mayville, N. Y., writes: "Will you please advise me in regard to the practice of wetting horses' feet and legs by means of a hose, in warm weather, after being worked or driven, whether it is injurious to them or not?"

ANSWER:—I cannot advise to wet and to clean the feet and legs of a horse that comes home from work, by means of the hose. It is far better to clean them when dry with the brush, with a whisk of straw or hay, or with a woolen rag. The friction thus applied promotes and facilitates the circulation of the blood, and thus prevents irregularities, while a sudden application of cold water may have the opposite effect.

Insufficient Sexual Impulse—Colic.—S. C., Brookside Mich., writes: "Can you tell me why my mare will not accept the horse? She is eight years old, raised a fine colt last year, and has a good horse colt, five weeks old. She is on pasture, but has no grain. I have used her but very little since she foaled, and that at light work. I tried her on the 10th (the 9th being Sunday) and every week since then. When the colt was three weeks old there was a slight discharge for a few days—just enough to make her mussed or dirty—which, in every respect, as far as I could see, indicated a mare in heat; but she was as cross to the horse that week as usual. She eats well, seems to feel well and is all right in every respect as far as I can see."

ANSWER:—You have allowed the proper time to pass. If you had scruples to have your mare served on Sunday, why did you not take her to the horse on Saturday? You will have difficulty now. The only thing I can advise you is to take her to the horse once a week until she is in season. Your other mare died of colic. If you had looked a little closer when making the post-mortem examination you would have found an aneurysm in the anterior mesenteric artery. Your colic remedies are ineffective, and the lard is not only injurious, but even dangerous.

Bone-spavin Hidden by Bog-spavin.—H. T. C., Rushville, Ind., writes: "I have a horse that has been lame in one of his hind legs for nearly a year. His leg is badly swollen both inside and outside at the hock-joint, and to press on the swelled parts it feels soft and feverish. He is also curbed a little in same leg. I took him to a veterinary surgeon and had him examined when he first became lame, and he recommended the application of a blister, which I applied and which appeared to help him for awhile, but in a little while he was worse than ever. I took him to the veterinary surgeon again a short time ago and he recommended the same treatment again. I have applied the blister as directed, but it does not appear to help him. He has not been worked any for some time. Would like to have your opinion as to what you think caused lameness and your treatment of same."

ANSWER:—The lameness, it seems, is caused by the bone-spavin, hidden in this case, by a bog-spavin and thoroughpin. If the horse is also curbed, there is very little prospect of a cure. The latter, at any rate, can only be effected if the animal has perfect rest for at least a couple of months. As this is impossible in the summer, it is advisable to delay the treatment of all such cases until winter, or until the fly season has past. You will find a description of the treatment of spavin in one of the November numbers.

Apoplexy—Colic.—J. E. D., Buckley, Ill., writes: "Two weeks ago, while driving my six-year-old mare, she suddenly stopped, staggered and fell without any previous warning. Her limbs became very rigid, eyes dilated, and in a moment or two she died. I had driven moderately and she did not sweat any, nor was there any violent breathing, and when I went to her head she was numb.—Yesterday, when I went out in the morning to take out my team, I found another mare suffering apparently from colic. She was suffering very much, and looked anxious. I led her out where she could lie down and be comfortable, and after a little she began to get better, when suddenly she became stiff and rigid like the first, laying flat and kicking her hind legs, eyes and mouth twitching and ears moving back and forth. She almost stopped breathing; in fact, for a moment I thought she was dead. Soon she began to get better, and in half an hour was all right, and continues so. From the symptoms I think they were both poisoned. They both run in the same pasture of nights, but there is nothing in it that I can think is poisonous; it has been used for years. What kind of vegetation would be likely to produce such symptoms?"

ANSWER:—Your six-year-old mare died from apoplexy, possibly caused by the rupture of a blood vessel, and the other mare suffered from an attack of colic. There is nothing in your statements that indicates poisoning.

Colic.—J. C. B., Dearborn, Mo., writes: "I had a large, fine mare, eight years old, that was never sick in her life till the day she died. She was running on blue-grass and white clover with her two-months-old colt and two or three other horses. She slobbered (caused, of course, by the white clover) a great deal more than any of the others. About six o'clock in the morning I watered all of the horses, and she drank and then took a lick or two of salt, when I noticed something wrong. She did not want to move around, was not swollen any place, drew her breath rather hard, and in a short time began sweating about the head and neck. She became perfectly cold, and finally broke out in a cold, clammy sweat nearly all over. I could detect no pulse scarcely. She was quivering about the flanks all the time. A short time before she died she would move a few steps at a time. About one o'clock she laid down with a groan. Previous to this she had not groaned or by any showed that she was suffering acutely. After the first groan she suffered terribly, groaning loudly and getting herself in every possible position till she expired, about one o'clock p.m. What was the matter with her, and what should have been done for her?"

Nothing was done except that a man bled her in the mouth."

ANSWER:—Your mare died of colic, caused, probably, by an aneurysm in the anterior mesenteric artery, and a closing of one or more of the arteries of the large intestines. In all such cases not much can be done by way of treatment, and in your case, in which the animal died, according to your statement, in about seven hours, nothing could have been done.

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Our Miscellany.

ROMANCE.

She didn't like me when we met,
But turned away and pouted,
'Twas very cool, I own, to get
At first a snub so final; yet
I clung to hope and doubted.

Strange as it seems, a few short weeks
Confirmed my sanguine guesses;
I came to understand her freaks,
And even dared to kiss her cheeks
And stroke her golden tresses.

So time went on, and as we grew
To know each other better,
She bravely learned to kiss me, too;
And when she strangely tried to woo,
Somehow I used to let her.

The privilege still yet is mine
With kiss her lips to smother;
Still 'round my neck she likes to twine
Her soft, white arms. I'll drop a line,
I guess, and ask her mother.

This rhyme produces envy—strife,
Within your reason, maybe;
So let me take a leaf from life:
Her mother is my darling wife,
And she my blessed baby.

—F. D. S., in Rochester Talisman.

THE poorest man on earth is the one who has the fewest trials.

CELLULOID in solution is said to make a fine lacquer for metal and a good wood varnish.

If the sun were a hollow air-ball, it would take 1,331,000 globes the size of the earth to fill it.

PAINTERS are not of a military turn, generally, yet they stand by their colors.—*Texas Siftings*.

SOME of the people who are crying loudest for more money are not trying to get it by earning it.

In order to preserve wire rope, it should be covered with raw linseed oil, mixed with vegetable tar.

THE most unalterable of water colors has been found to be yellow ochre, terra sienna, sepia and blues.

THE effect of removing tassels from corn is to turn the strength of the plant to the ovaries, and so produce a larger amount of grain.

NEARLY all the cities of Utah are controlled by the Gentile population. This is especially true of Ogden, Salt Lake City, Park City and Provo.

If a man serves him faithfully six days in the week, the devil doesn't care much whether he goes to church on Sunday or not.—*New York Herald*.

TAKE Dr. Hoxsie's Certain Croup Cure in the satchel when traveling, for violent colds. Mailed on receipt of 50 cts. Address, Hoxsie, Buffalo, N. Y.

AN expert electrician insists that an electric train, making one hundred and twenty-five miles an hour, would require 7,000 feet in which to come to a standstill.

A PREHISTORIC smelting furnace has been discovered in New Mexico. Near by, a bar of pure silver was found. The furnace had been filled with ore and never fired.

BRAZIL is larger than the United States; but in the whole twenty states which make up the republic there are not as many people as in New York and Pennsylvania.

"THE widest plank on earth" is on exhibition at the railroad depot in Humboldt, Cal. It was cut at the Elk river mill, and is sixteen feet in width. It will be among the Humboldt exhibits at the World's Fair in Chicago.

A COLORED brother thus addressed his congregation: "De fo' part of de house will please sit down; fo' de hind part cannot see de fo' part if de fo' part persist in standing befo' de hind part, to de uttah obsclusion of de hind part by de fo' part."

PROBABLY the most extensive farmer in all Pennsylvania is Dr. Livingood, of Womelsdorf, Berks county. His farms cover about 2,000 acres and are worth from \$200,000 to \$250,000. He nets an average of 4 per cent on his investments, and is satisfied.

A SCOTCH dominie, after telling his scholars the story of Ananias and Sapphira, asked them, "Why does not God strike everybody dead who tells a lie?" After a long silence one little fellow exclaimed, "Because, sir, there wadna be anybody left."

ONE OF THE NICEST and best Tonics and anti-acids for dyspeptics is Dr. D. Jayne's Tonic Vermifuge. When used in conjunction with the Sanative Pills, it rarely fails to be effective; while its moderate price brings it within the reach of every one. Sold by all Druggists.

THE largest single building on the globe is said to be the Freihaus, a monster apartment house of Vienna. In it are 1,500 rooms, arranged so as to make 400 dwelling apartments. Two thousand one hundred and twelve persons live under the one great roof, a population sufficient to make a city large enough to incorporate and furnish with a full set of aldermen. The immense building has 130 staircases and 50 elevators. The postmen say they often deliver 1,000 pieces of mail matter at this house in a single day.

THE number of pupils enrolled in all the public schools of the country is 12,291,259, more than five times the population of Massachusetts, or nearly three times the population of all New England. Of this number of school children you could make eight cities equal in population to New York, or twelve cities equal to Philadelphia, or twenty-seven cities equal to Boston. They would form a procession reaching, single file, from New York to San Francisco, or three columns deep from Boston to Chicago. The annual increase of enrollment in the public schools of the entire country has been for the last few years about 231,000. This is a little less than 2 per cent.

SOME Americans who were recently going through the Jardine des Plantes of Paris stopped to look at a big rattlesnake in a cage. It lay motionless, apparently asleep; but when two of the party who had lingered behind began to converse in English, the snake moved, lifted up its head, and gave every sign of being intensely interested. They hastened to tell their companions that the snake understood English. The whole party then returned to the cage. The snake was apparently asleep again. They conversed loudly in French, but the snake did not give the least sign of being conscious of his surroundings; then someone spoke in English. Instantly the reptile raised his head and moved it back and forth, showing the same alertness that he had when the language was spoken in his hearing a few moments before. This curious experiment was tried a number of times, always with the same effect. On inquiry, the party learned that the snake was from Virginia.

VARIOUS USES OF EGGS.

It is an error to suppose that eggs have no considerable use except for food. They are employed in calico printing, in photography, in gilding, in clarifying various liquors and in bookbinding. A large business has sprung up in the preparation of photographic paper with salted albumen, and one establishment alone is said to have used more than two million eggs in six months for this purpose. Many attempts have been made to find a vegetable or animal substitute for albumen, but in vain. A prize of \$2,000, offered thirty years ago by an English society for the discovery of a material or process of replacing albumen in calico printing, still remains untaken.

Nor are the yolks of eggs used in manufacturing wholly wasted. They are also employed in the arts, and a manufacturer in Vienna solidifies them. Possibly, too, the development in canning will before long give us canned eggs, or perhaps condensed eggs, suitable at least for cooking. At any rate, it would seem worth while to raise part of the eggs which are consumed by other countries.—*Bradstreet's*.

WHY CHINA IS THE FLOWERY KINGDOM.

"We speak of your country as the 'Flowery Kingdom,'" a reporter of the *Sun* said to an officer of one of the Six Companies in San Francisco last autumn. "Do we get that name from you? Is that what you call China?"

"Yep," said the dignitary. "We calle him Flowelly Kingdom alleee same you callees him. But you Mellicans mean to call our Sina that name like you speakee about some flowers glowing one summer in a man's garden. We Sinamen calle Flowelly Kingdom same like evelly man is flowel. Our great Sina teachers hab tolle us that Sina is alleee samee like garden, and evelly man and woman is alleee samee like flowels. That mean we got on'y littie time to live. We come up like littie leaf from littie seed. We glow hgh one summer. We makee pleety flowel, then we done and fall down and auothel flowel come up in our place. That what Sinamen mean 'bout Flowelly Kingdom. Sinamen hab velly old teacher, and him say we makee lib likee flowel—so we must not steal or fight or kill othel mans; must live alleee samee like flowels in Flowelly Kingdom."

FIGS AND THISTLES.

The man who does all his praying on his knees, prays very little.

The devil never asks anybody to go farther than the next corner to begin wth.

The man who is anxious to do right has friends in heaven who want to help him.

A Christian with a long face is one of the best advertisements the devil has on earth.

One way to drive the boys and girls to the bad is to shut up the parlor and live in the kitchen.

All that is needed to make a man hate himself is for him to get a good, square look at himself.

The greatest wrongs people commit against each other are those of which they are not conscious.

If some people would always think twice before they speak, they would keep still a good deal.

You will never go to heaven when you die unless you get more than half way there while you live.

If you have never tried to make anybody happy, you have no idea how far you are away from heaven.

When your heart is so heavy that you can't laugh yourself, the next best thing is to do something that will make somebody else laugh with joy.

POT-GROWN STRAWBERRY PLANTS.

Sure to live and bear the first season.

Lovett's Early.—The best early. **Shuster's Gem.**—The most valuable midseason sort. **Gandy.**—The latest of all. Dozen each for \$2.50; 25 each \$4.00; 50 each \$7.00; 100 each \$12.00.

Beebe.—An extra large most prolific and highly flavored new sort. Dozen, \$2.50; 25 for \$4.00. **PARKER EARLE,** **JUCUNDA IMPROVED,** **MIDDLEFIELD,** Doz., \$1.00; 100, \$5.00. **Bidwell, Bach, Downing, Crescent, Haverland, Jessie, May King, Michel's Early, Monmouth, Parry, Pearl, Sharpless, Warfield, Wilson.** Doz. 50c; 100, \$2.50.

An Illustrated Pamphlet giving descriptions and complete instructions for culture and management with a colored plate of Lovett's Early, Shuster, and Gandy mailed free. The Pamphlet gives prices also for Ordinary or Layer Plants and for Trees and Plants of all varieties of Orchard and Small Fruits, Nuts, etc., worthy of culture.

J. T. Lovett Co., Little Silver, N. J.

SOLID IT WILL COST YOU NOTHING

TO EXAMINE THIS WATCH. WE PAY ALL EXPRESS CHARGES! YOU PAY NOTHING. We are determined to introduce our fine Gold and Gold Filled Watches in every state, and different from all others, we offer as our leader the FINEST SOLID GOLD WATCH WE HAVE. We believe that many of the readers of this paper who heretofore have never answered advertisements will take advantage of our WONDERFUL OFFER and get a SOLID GOLD WATCH and help us introduce our goods.

DESCRIPTION OF WATCH. THIS WATCH IS WARRANTED SOLID GOLD, AND THE FINEST AND BEST SOLID GOLD WATCH WE SELL. (A Written Guarantee is sent with each watch.) Such watches are never advertised in papers, they are only found in the finest jewelry stores at from \$60.00 to \$100.00, (consequently heretofore have only come within the reach of the wealthy.) The cases are Full Box-Joint SOLID GOLD THROUGH AND THROUGH, Hunting Style, Stem-Wind and Stem-Set, Set, Engraved by Hand in the most Beautiful Design imaginable and we guarantee them equal, if not superior, in appearance to any watch you ever saw. The Movement is such as you would want in a fine SOLID GOLD Case. Full Jeweled, Expansion Balance, Quick Train, Full Plate, Stem-Wind and Stem-Set, Accurately Regulated and Adjusted and *Warranted for 5 years.* (A written guarantee is sent with each watch.) This watch is equal to watches that are sold for \$100.00, but our regular price is \$39.50, but FOR 30 DAYS we make a GRAND OFFER to advertise our goods. READ IT CAREFULLY!

OUR LAST GRAND OFFER! If you are ordering in good faith, cut this ad, out and send us by mail, and we will send this watch to you BY EXPRESS, (ALL EXPRESS CHARGES PAID BY US). Without paying one cent you can examine it thoroughly, and if you do not find it exactly as represented and every word we have said true, LEAVE IT, and you do not pay a cent; otherwise pay the express agent OUR SPECIAL ONE-HALF INTRODUCTORY PRICE

\$19.75

We will send this watch to you BY EXPRESS, (ALL EXPRESS CHARGES PAID BY US). Without paying one cent you can examine it thoroughly, and if you do not find it exactly as represented and every word we have said true, LEAVE IT, and you do not pay a cent; otherwise pay the express agent OUR SPECIAL ONE-HALF INTRODUCTORY PRICE

OUR LAST GRAND OFFER! If you are ordering in good faith, cut this ad, out and send us by mail, and we will send this watch to you BY EXPRESS, (ALL EXPRESS CHARGES PAID BY US). Without paying one cent you can examine it thoroughly, and if you do not find it exactly as represented and every word we have said true, LEAVE IT, and you do not pay a cent; otherwise pay the express agent OUR SPECIAL ONE-HALF INTRODUCTORY PRICE

\$19.75

CAUTION! To protect us against dealers and speculators ordering in large quantities, we will only sell ONE WATCH to any person at \$19.75, after that the price will be \$39.50. READ THIS AD. CAREFULLY, and reason if you ever saw such a liberal offer before. A BETTER WATCH THAN WAS EVER ADVERTISED BEFORE. A \$100.00 Solid Gold Watch for \$19.75!! EXAMINATION FREE!! WE PAY ALL EXPRESS CHARGES—YOU DON'T PAY A CENT!! Then after considering what we say, Read What a Few of Our Customers Write. Thousands write the same way.

MENTON FURNACE, Fayette County, Pa. MR. A. C. ROERUCK, 319 Nicollet Ave., Minneapolis, Minn. DEAR SIR:—I send you by express today \$19.75 in payment for water, I am surprised to find it such an elegant watch. I got the Express Agent to take it to Uniontown and have it examined by the best jeweler in town and he said the case itself was worth \$30.00. Send me your catalogue of prices and if I can get you any orders I will gladly do so.

EDENTON, N. C., April 8, 1891. A. C. ROEBUCK Esq., (Successor to the Warren Co.) Minneapolis, Minn. DEAR SIR:—Your watch received on the 6th, am very well pleased with it and think it the best watch for the money that I ever have seen. And the way you send them convinces me that I am dealing with a fair and square house. Please send me your catalogue, prices and conditions as to the way you allow your agents to examine them. Yours Truly, Lock Box 82.

CARPENTERS EDDY, June 25, 1891. ROEBUCK & CO.—RECEIVED the watch a week ago. Will say it far surpasses my expectation. For honest, square dealing & can recommend your house as one that gives more for the money than any other house in the United States. Yours, &c., J. D. BOGART.

GOOD THUNDER, Minn. GENTS.—RECEIVED last order in perfect condition and am well satisfied, and can say, do not know more fair, stronger and reliable firm than ROEBUCK & CO., am glad to find I can now get what is advertised. I will favor you with my future orders, as I can get just what I send for. Yours truly, F. L. RUSTE.

WE WANT YOU TO ORDER TODAY. This paper may get lost and the ad. never appear again. Address A. C. ROEBUCK & CO., 319 Nicollet Avenue, Minneapolis, Minn.

Mention Farm and Fireside when answering this advertisement.

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Made from our celebrated Silver Steel, tempered by our patented methods. It is the fastest cutting, easiest running saw made. It will out-cut any other saw in use. IN HARD WOOD AND FROZEN TIMBER. It will do satisfactory work where other saws fail. This has been demonstrated by actual tests in all kinds of woods, with the most improved saws. It is the best "all the year around saw used." WE CHALLENGE THE WORLD to ordenee a saw equaling the ATKINS SILVER STEEL DIAMOND.

ATKINS' SILVER STEEL DIAMOND

PRICE, INCLUDING HANDLES AND RAKER GAUGE, \$1.00 PER FT. For sale by the trade. Ask your hardware dealer for the Atkins Silver Steel Diamond and take no other. If the dealer will not order it for you remit amount with order direct to us.

E. C. ATKINS & CO.

Indianapolis, Ind. Memphis, Tenn. Chattanooga, Tenn.

Minneapolis, Minn.

Cincinnati, Ohio.

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MANAGERS WANTED Everywhere to take charge of our business. Advertise, distribute circulars & employ help. Wages \$50 to \$125 per month, Expenses advanced. State experience. Wages expected, also your preference for home work or traveling.

SLOAN & CO., Manufacturers, 294 George Street, Cincinnati, Ohio.

GOOD WORDS.

WASHINGTON, D. C., March 18, 1891.

You will please accept my sincere thanks for the two pictures, received some time ago, and the Peerless Atlas, which reached me a few days since. The Atlas is indeed appreciated. It is the best atlas we have ever owned or seen.

ANNIE ANDREWS.

NAPOLEON, OHIO, February 21, 1891.

I received the Peerless Atlas of the World in elegant shape and am well pleased with it. I would not give it for five dollars if I could not get another.

MRS. JOHN F. KLEIN.

ALFRED CENTRE, N. Y., February 24, 1891. I acknowledge receipt of the Peerless Atlas of the World. Am very much pleased with it. Would not sell it for any consideration if out of print. Will use it in teaching.

C. D. GREEN.

BELLVILLE, TEX., April 2, 1891.

I received the picture, "Christ on Calvary," in good order and would not part with it.

MRS. MARY S. AMSLER.

PORTLAND, OREGON, April 7, 1891.

Received the new Cook Book all right. Am very much pleased with it. Many thanks.

MRS. C. HOTALING.

\$500 FOR A WIFE

We will give \$200 to the first person telling us where the word WIFE is first found in the Bible, to the second, \$150; to the third, \$100; to the fourth, \$50; fifth, \$25; sixth, \$10. A SOLID GOLD WATCH; 7th; 7th, a Pair Diamond Ear Jewels; 8th, a Diamond Ring. To each of the next 28 a Solid Silver WATCH. To the next 100 a choice and valuable House Lot. Answers must reach us on or before October 1st, 1891. With your answer send 25c postage note for a subscription to our Illustrated 16pp. paper and our new illustrated Catalogue of Watches, Diamonds, etc. Our October issue will announce the result of the contest, with names and addresses of the winners.

\$100 REWARD if we cannot prove that we pay every prize we offer and pay them honestly. Over \$10,000 given in premiums the past year. This offer is made solely to introduce our publication into new homes. Give full name and address, and send subscription money to CANWELL & COMPANY, 41 Beekman Street, New York City.

LADIES

MISS EDNA L. SMY

Smiles.

HER WEAKNESS.

O woman, in our hours of ease
Uncertain, coy, and hard to please,
When pain and anguish wring the brow,
Then none so cheaply pleased as thou!
We're only to submit to take
Hot rhubarb tea and anti-ache,
And gizzard oil and ipecac,
And porous plasters on the back,
A flax-seed poultice, catnip tea,
And Quackem's pet discovery,
Hot-water bags, and sweats beside,
And camphor nasally applied,
And castor-oil and vaseline,
And coals with feathers burnt between,
And soothing syrup, paregoric,
Cold-water cloths, and drinks caloric,
And all the housewife's category—
'Tis then we see her in her glory,
Needful, to make her bliss complete,
But mustard plasters on our feet.
—Harper's Bazaar.

RELIGION THAT A PARROT COULD SCARE.

A good story is told of a parrot who had always lived on board of ship, but who escaped at one of the southern ports and took refuge in a church. Soon afterwards, when the congregation assembled, and the minister began preaching to them in his earnest fashion, saying there was no virtue in them—that every one of them would go to endless perdition unless they speedily repented. Just as he spoke the sentence, up spoke the parrot from his hiding place:

"All hands below!" To say that "all hands" were startled would be a mild way of putting it. The peculiar voice and unknown source had much more effect on them than the parson's voice ever had. He waited a moment, and then, a shade or two paler, he repeated the warning.

"All hands below!" again rang out from somewhere.

The preacher started from his pulpit and looked anxiously around, inquiring if anybody had spoken.

"All hands below!" was the only reply, at which the entire panic-stricken congregation got up, and a moment afterward they all bolted for the doors, the preacher trying his best to be the first, and during the time the mischievous bird kept up his yelling:

"All hands below!" There was one old woman present who was lame, and could not get out so fast as the rest, and in a short time she was left entirely alone. Just as she was about to hobble out the parrot flew down, and, alighting on her shoulder, yelled in her ear:

"All hands below!" "No, no, Mister Devil!" shrieked the old woman, "you can't mean me. I don't belong here. I go to the other church across the way."

CONQUERED.

"Go!" No, this is not the story of a horse race. The monosyllable that heads this chapter was hurled by the Marquis de Billette at the head of his errant son and heir.

"Go!" repeated the proud father. "Let me never see your face again. Never again shall your feet cross this threshold. To think that one of your noble name and lineage should wed an obscure salesgirl! Get thee hence! As long as I live these ancestral balls shall never be darkened by your vile presence. Go starve—or steal, I care not which. You can bring no more disgrace upon our honored name than you have already done."

"Yes, I can, father," said the young man, in a hard, metallic voice, which harmonized well with the steely glitter in his eye and his brazen front. "Either you forgive me or I go to work. You shall have five minutes in which to decide."

In four minutes the haughty nobleman had found his mind, and in thirty seconds more had made it up.

"You have won," said he. "But little did I dream of the depths of depravity in your nature that you have to-day revealed."—Indianapolis Journal.

IN THE MIDST OF LIFE.

Citizen—"I hear Mr. Officeholder is dead." Statesman—"Yes; he died about five minutes ago."

Citizen—"I dislike to show any unseemly haste, but I desire to put in my application for appointment as his successor."

Statesman—"Walk into the other room and take your place in the line."—New York Weekly.

DEATHLESS DEVOTION.

Kind father—"My dear, if you want a good husband, marry Mr. Goodheart. He really and truly loves you."

Daughter—"Are you sure of that, pa?"

Kind father—"Yes, indeed. I've been borrowing money of him for six months, and still he keeps coming."—New York Weekly.

Two valuable presents—a Silver Plated Butter Knife and a Silver Plated Sugar Shell, both offered free to any one subscribing or renewing during August. See our grand offers on page 363.

THE BOW UNBENT.

"Yes," said the young man, as he threw himself at the feet of the pretty schoolteacher, "I love you and would go to the world's end for you."

"You would not go to the end of the world for me, James. The world, or the earth, as it is called, is round like a ball, slightly flattened at the poles. One of the first lessons in the elementary geography is devoted to the shape of the globe. You must have studied it when a boy."

"Of course I did, but—"

"And it is no longer a theory. Circumnavigators have established the fact."

"I know, but what I meant was that I would do anything to please you. Ah! Mierva, if you knew the aching void—"

"There's no such thing as a void, James. Nature abhors a vacuum; but admitting that there could be such a thing, how could the void you speak of be a void if there was an ache in it?"

"Well, at all events," exclaimed the youth, "I have got a pretty fair balance in the savings bank, and I want you to be my wife. There!"

"Well, James, since you put it in that light, I—"

PROSPECTING.

"Marriage licenses here?" he whispered to the county clerk.

"Yes."

"Get one any week day?"

"Yes."

"Girl have to be here?"

"No."

"How soon can I get one after she agrees?"

"In fifteen minutes after you get here."

"Sure pop?"

"Yes. Any particular hurry about it?"

"There is. There's seven of us after the same girl, and if she says 'Yes' to me, I've got to be spliced inside of half an hour or she'll change her mind. I'm just prospecting, you see. Be prepared for a cyclone about two days hence."—Detroit Free Press.

A SOLEMN MOMENT.

After the bridal party partook of a sumptuous banquet a younger brother of the bride got up and said, solemnly, raising his glass:

"Ladies and gentlemen, I have to propose a toast, which, however, must be drunk standing. Please take your glasses and rise up."

The guests, although somewhat bewildered, did so.

"Now," said the young scamp, "if you will remain standing for a few minutes I'll find out who has been sitting on my new stovepipe hat."—Texas Siftings.

THAT SILLY CHILD.

"Your dear little boy paid me such a pretty compliment; he said I looked real handsome," said Mrs. Hostetter to Mrs. Lydia Pynkeuham.

"Did he say that?"

"Indeed he did, the little angel."

"Oh, he is such a silly child. Sometimes I blink he has not got good sense," responded the mother; and now they have quit swapping bangs when they go out shopping.—Texas Siftings.

A MEAN TRICK.

"Look out for him," said Hostetter McGinnis, referring to a prominent Texas gentleman; "he is a hypocrite, and will play you a bad trick some day, just like he did me."

"What did he do to you?"

"What did he do? I borrowed \$10 of him, and the double-dyed scoundrel tried to make me pay it back. Look out for him, I tell you; you can't rely on him."—Texas Siftings.

CHEAP DOCTORING.

Auxious mamma—"Little Dick is upstairs crying with the toothache."

Practical papa—"Take him around to the dentist's."

Anxious mamma—"I haven't any money."

Practical papa—"You won't need any money. The toothache will stop before you get there."—Street & Smith's Good News.

YOUTHFUL KNOWLEDGE.

Teacher—"Who did I tell you yesterday was the man who succeeds? You may answer, Johnny."

Johnny—"I don't remember, ma'am; but I know that Dickey Hicks is the boy who sucks eggs."—New York Herald.

EXPENSIVE EMULATION.

Dashaway—"That was a beautiful dress your friend, Mrs. Wickstaff, had on the other night."

Bingo—"Yes. It cost me \$100."

Dashaway—"How so?"

Bingo—"My wife saw it."—Cloak Review.

DEATHLESS DEVOTION.

Kind father—"My dear, if you want a good husband, marry Mr. Goodheart. He really and truly loves you."

Daughter—"Are you sure of that, pa?"

Kind father—"Yes, indeed. I've been borrowing money of him for six months, and still he keeps coming."—New York Weekly.

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Look Here, Friend. Are you Sick?

heavy load on the stomach, sometimes a faint pain in the pit of the stomach, which food does not satisfy. Are your eyes swollen and feel clammy? Have you a dry cough? Do you expectorate greenish-colored matter? Are you hawking or spitting all day long? Do you feel tired all the while? Are you nervous, irritable and gloomy? Do you have forebodings? Is there a giddiness, a sort of whirling sensation in the head when rising up suddenly? Do your bowels become constipated? Is your skin dry and hot at times? Is your food slow and stagnant? Are the whites of your eyes tinged with yellow? Is your nose塞nous and thick colored? Does it deposit a sediment after standing? Do you frequently spit up your food? Sometimes with a sour taste and sometimes with a sweet? Is this frequently attended with palpitation of the heart? Has your vision become impaired? Are there spots before the eyes? Is there a feeling of great prostration and weariness? If you suffer from any of these symptoms I will gladly send you by return mail a sample bottle of the best remedy on earth for the speedy and permanent cure of the above-named complaints. This will enable you to test my medicine free of all cost. No other medicine manufacturer can afford to do this. I know my remedy will cure you no matter how badly you suffer. Write to-day, stating your disease. A trial costs you nothing. Address Prof. HART, 80 Warren Street, New York.

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Be gone dull carc	Dearest Mae
Bell Brandon	Departed days
Ben Bolt	Dermot Astore
Bessy's mistake	Ding, dong, bell
Betsy Baker	Don't come late
Beware	Dream is past
Birds in the night	Emerald Isle
Blue-eyed Mary	Ever of thee
Blue-eyed Milly	Fairy temper
Black-eyed Susan	Farewell ladies
Blue tail fly	Father's boy
Bold privateer	Fionna's son
Bonnie Dundee	Flame's a wake
Bonnie old oak	Flies a bird
Broken yoke	Flock to size
Brose and butter	Garibaldi hymn
Bruce's address	Ginger's wedding
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Buy a broom	Green sleeves
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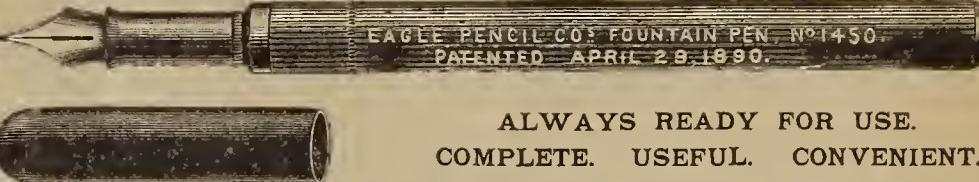
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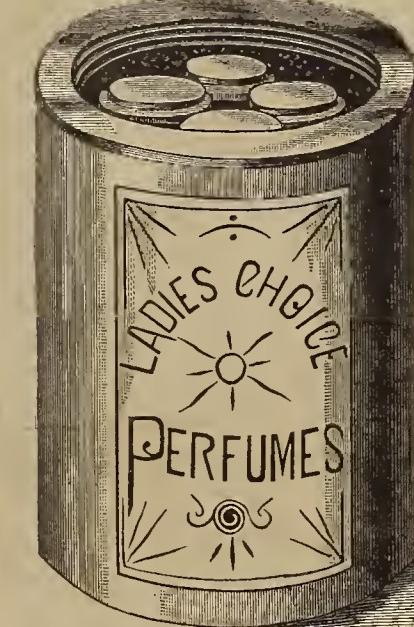
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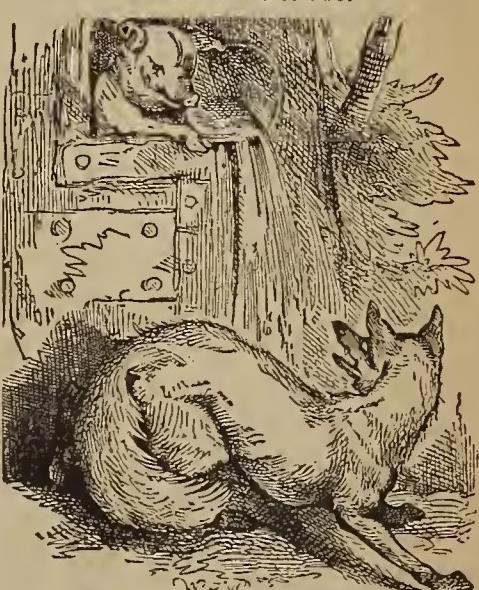
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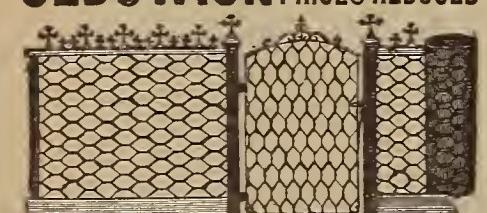
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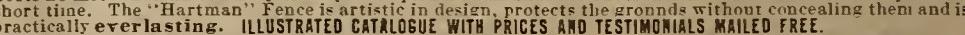
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P.P. MAST & CO., SPRINGFIELD, OHIO.

ALSO MANUFACTURERS OF

BUCKEYE FERTILIZER DRILLS, BUCKEYE RIDING & WALKING CULTIVATORS, BUCKEYE SEEDERS, BUCKEYE CIDER MILLS and HAY RAKES. We also manufacture this same style in a Combined Grain and Fertilizer Drill.

BRANCH HOUSES: Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; San Francisco, Cal.

Send for Circular to either of these firms or to us.

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FREE TO BOYS AND GIRLS UNDER 18 WITHOUT ONE CENT OF MONEY. If any boy or girl under 18 years of age wants a strictly first-class safety bicycle they can obtain it free, without one cent of money. We shall give away, on very easy conditions, 1000 or more. The wheels are 25 inches, with crescent steel rims and molded rubber tires, and run on hardened steel cone bearings, adjustable to wear; geared to 46 inches; detachable cranks; front to five inches throw; frame finely enameled, with nickel trimmings. Each machine is supplied with too bag, wrench and oiler. Equal in quality to those sold on the market for \$45.00. We have both boys' and girls' styles. If you want one write at once to WESTERN PEARL CO., 308 Dearborn St., Chicago, Ill. Mention this paper.

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If you are going to build or have leaky shingle or tile roofs, send for sample and circular.

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We want many thousands of new subscribers during August, and are offering very handsome presents to all who subscribe or renew this month. It will pay you to read page 363.

FARM & FIRESIDE

EASTERN EDITION.

VOL. XIV. NO. 22.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, AUGUST 15, 1891.

TERMS 50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,700 COPIES.

The Average Circulation for the 24 Issues of
the last 12 months, has been

250,675 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,300 copies, the Western edition
being 150,400 copies this issue.

Farm and Fireside has the Largest Sub-
scription List of any Agricultural
Journal in the World.

Current Comment.

A SUBSCRIBER, who wrote indorsing
the comment in last issue on the
taxation amendment now before
the voters of Ohio, inclosed in his letter a
single-tax tract, from which we take
the following extracts:

"TAXES ON the products of labor tend to
restrict production. Therefore, no taxes
should be imposed on improvements or
commodities."

"A tax on land values does not restrict
production or lessen the reward of the
users of land, but, by making it unprof-
itable to hold land out of use, it opens
natural opportunities for labor and stim-
ulates production. Therefore, all taxes
should be levied on land values."

"Every man is entitled to the full re-
sults of his own labor or enterprise in
producing goods, erecting buildings, im-
proving lands, or otherwise contributing
to the satisfaction of the wants of himself
or others; but that value which attaches
to land by reason of the increased com-
petition for its use, and which is due to
the growth of population and public im-
provements, justly belongs to the whole
community. Therefore, the public should
take by taxation the full rental value of
land."

"Whenever ground rent is thus taken
for the support of government, industry
and enterprise will be relieved from tax-
ation, and no inducement will remain for
holding land without using it."

Single-tax advocates believe in fallacies.
A single tax on land values cannot relieve
labor from taxation. The tax on agricul-
tural and mining land must be paid out
of what is produced from the land by
labor. The tax on a farm must come out
of its crops. The tax on a mine must
come out of the ores mined. The tax on
the land value of a city lot used for resi-
dence purposes must be paid out of the
earnings of the owner from his trade,
business or profession. The tax on the
land value of a city lot occupied by a
business block must be paid out of the
rewards of somebody's productive indus-
try. Labor pays the tax on all."

Single tax does not exempt improve-
ments from taxation. Much of the com-
parative high value of a city lot is due to
the improvements, public and private,
that are on or near it. The more and bet-
ter the improvements, the higher the land
value and the greater the tax. Hence,
the tax on land value is indirectly im-
posed on improvements.

For the public to take by taxation the
full rental value of land would destroy

private ownership in land and confiscate
property. To tax farm land to its full
rental value would leave little or nothing
for farm improvements. In other words,
they would be taxed almost out of ex-
istence.

Again, to illustrate the injustice of taxing
farm land to its full rental value, take
the following case: A man dies, leaving a
good farm to his wife and young chil-
dren. Under the present system of prop-
erty and inheritance, the rental value of
the farm may be sufficient to maintain
the widow her lifetime, and feed, clothe
and educate the children until they are
able to support themselves. Under the
proposed single-tax system, there would
be nothing left for the widow and chil-
dren, unless they were able to run the
farm themselves. If not able to run the
farm and pay as tax its full rental value,
determined by competitive bidding, they
would be evicted, and left to struggle
along in poverty or become objects of
public charity. Verily, under single tax,
from her that hath not shall be taken
even that which she hath.

"In order to destroy the evil of land
speculation, single tax would bring
greater evils upon us."

THE business men of this country,"
says the Baltimore *Manufacturer's
Record*, "are too apt to forget the
soundness of America's vast progress.
The United States is, to-day, almost the
only great country in the world whose
future is brighter than its past. Great
Britain has, in many respects, reached the
limit of its greatness. It can no longer be
the manufacturing center of the world, for
we have taken the foremost position in
that line. Its vast iron and steel business
is yearly increasing in cost of production,
while ours is decreasing. It cannot meet
the world's ever-growing demand for iron
and steel, because it cannot increase its
production to any great extent in competi-
tion with this country. It produced no
more pig-iron in 1890, notwithstanding
the high prices prevailing, than in 1882,
while we more than doubled our output.
Much of its ore it imports from far distant
regions. Its cotton is all imported. It
spends about \$750,000,000 a year for foreign
food-stuffs. On the continent, every nation
is burdened with debt, and none can ever
hope to pay off its obligations. Measured
by their natural resources and their possi-
bilities, they are bankrupt. In all of them
the cost of production and of living is
steadily increasing. In the United States
we have scarcely laid the foundation of
our future greatness. In natural re-
sources we are richer than all of Europe
combined; we are paying our debts faster
than they are due; we have barely
scratched the ground in the development
of our mineral wealth; we were rich enough
to stand a decrease last year of 900,000,000
bushels of grain as compared with 1889, on
account of bad weather; we are rich
enough in addition to this to send \$70,000,-
000 in gold to Europe within a few months
without creating any financial trouble,
and that, too, after Europe had unloaded
on us millions of dollars of our stocks,
because our securities were the only ones
in the world that found a cash market
when the Barings and others were trying
to save themselves. In ten years, from
1880 to 1890, we have added \$2,000,000,000
to our capital invested in manufactures,

an increase of nearly 75 per cent. In
the same time the value of our manufac-
tured products has risen from \$5,300,000,-
000 to \$8,600,000,000, a gain of \$3,300,000,000;
or, in other words, we are now producing
manufactured goods at a rate of \$3,300,000,-
000 a year more than we were ten years
ago. The increase in capital invested in
manufactures in ten years, from 1880 to
1890, was greater than the entire amount
of capital invested in 1870, or only twenty
years ago. In these ten years the growth
of our manufacturing interests was greater
than the growth from the settlement of
America up to 1870. In these ten years
we have built 75,000 miles of railroad,
almost as much as our total mileage in
1880."

THE Mississippi legislature to be elect-
ed soon, will choose two United
States senators. At the primaries of
the dominant party are four candidates,
two in favor of the sub-treasury scheme
and two opposed to it, although in har-
mony with the Alliance in nearly every-
thing else. Practically, the sub-treasury
scheme has been submitted to a popular
vote. The result of the primaries held so
far indicates that a large majority of the
members of the next legislature will be
opposed to the sub-treasury plan, and that
the present senators, who are opposed to it,
will be re-elected.

In spite of the strong and growing op-
position in the ranks, the present lead-
ers of the Farmers' Alliance of the South
seem determined to force all the subordi-
nate Alliances to accept the land-loan and
sub-treasury schemes. President Polk de-
clares that our whole financial system
must be revolutionized, and that tariff and
free silver coinage are only secondary
questions.

THE present condition of our foreign
commerce is shown by the following
extract from the June statement of the
treasury department:

Our foreign commerce of the last fiscal
year, when compared with that of 1890,
presents a large and gratifying increase.
This will be better appreciated when it is
stated that the total value of the com-
merce of the fiscal year 1890 was the
largest in the history of the government,
and exceeded the total value of the com-
merce of 1889 by \$159,606,066.

The total value of our imports and ex-
ports of merchandise during the last fiscal
year attained its highest point, amounting
to \$1,729,330,896 as against \$1,647,139,093
during the fiscal year 1890, an increase of
\$82,191,803, and an increase of \$241,797,869
since 1889.

The value of our imports of merchan-
dice, also, during the last fiscal year was
the greatest in the history of our com-
merce, amounting to \$54,905,491 as against
\$789,310,409 during the fiscal year 1890, an
increase of \$55,595,082.

The excess in value of exports over im-
ports of merchandise during the last fiscal
year was \$39,519,914.

* * * * *

The new tariff law has been in operation
since October 6, 1890. During the nine
months ending June 30, last, the total
value of the imports of merchandise was
\$630,206,005, as compared with \$598,769,905
during the corresponding period of 1890,
which shows an excess for the nine
months of 1891 of \$31,436,100.

The value of the imports of merchandise
admitted free of duty, during the nine
months ending June 30, 1891, was \$295,963,-
665; the value of such imports for the cor-
responding period of 1890 was \$208,983,873,
showing an increase in favor of the nine
months ending June 30, 1891, of \$86,979,-
792, while for the same period the value of
imports of merchandise paying duty was
\$334,242,340, as compared with \$389,786,032
for the corresponding period of 1890, giving
a decrease in the value of merchandise
paying duty, imported during the last
nine months of the last fiscal year, of \$55,-
543,692. It will be further seen that during
the first nine months under the operation
of the new tariff, of the total value of
merchandise imported into this country,
46.9 per cent came in free, while during
the corresponding period of 1890, 34.9 per
cent was admitted free.

HERE has been much severe crit-
icism in the daily press on the so-
called secret wheat trust circular, a
million copies of which are reported to
have been sent out to farmers by the Al-
liance.

In the first place, there was no secret
about it. The circular itself asked for the
widest circulation possible.

It does urge farmers to withhold wheat
from the market until offered such prices
as are justified by the present condition
of the world's supply and demand for
wheat.

Briefly, it takes the crop estimates made
by the Department of Agriculture, the
same that have been given in the two pre-
ceding issues of this paper, and argues
from them that the minimum price for
wheat this year should be \$1.45 per bushel
at Liverpool, which is equivalent to \$1.35 at
New York, \$1.28 at Toledo, Detroit and
Cincinnati, and \$1.25 at Chicago.

The circular does not advise farmers to
"corner" wheat for the purpose of forcing
consumers to pay extortionate prices, but
urges them not to overcrowd the early
market, but to hold off a few weeks and
market the grain gradually as needed.

The circular has much to say about spec-
ulation in wheat, some of which may be
fallacious, but its object is good—to put
into the pockets of the farmers what
would otherwise be seized by grain spec-
ulators.

FOR ten years France has prohibited
the importation of American pork.

By a careful presentation of the case
on its true merits, by persevering efforts
and skillful diplomacy, the American
minister, Whitelaw Reid, has almost suc-
ceeded in having the prohibition removed.

The French chamber of deputies, by an
overwhelming majority, passed a resolution
repealing the prohibition of Ameri-
can pork. Before it could be acted upon
in the senate, the assembly adjourned.
When it convenes next autumn there is
no doubt but that the senate will also
pass the resolution, and a great foreign
market will be opened for our pork.

Mr. Phelps, the American minister to
Germany, is earnestly working to accom-
plish the same thing in that country. The
rigid enforcement of our meat inspection
laws will enable him to succeed. The
prospects are favorable that Germany will
repeal her prohibitory law on satisfactory
evidence that American meats are sound
and healthful.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICK.

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Silver, when sent through the mail, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope and get lost. Postage stamps will be received in payment for subscriptions in sums less than one dollar.

The date on the "yellow label" shows the time to which each subscriber has paid.

When money is received the date will be changed, which will answer for a receipt.

Discontinuances. Remember that the publishers must be notified by letter when a subscriber wishes the paper stopped, and all arrearages must be paid. When renewing your subscription, do not fail to say it is a renewal. If all of our subscribers will do this, a great deal of trouble will be avoided. Also, give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal.

We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

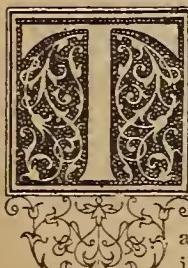
The Advertisers in this Paper.

We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

Our Farm.

COMMENTS ON CURRENT STATION LITERATURE.

BY JOSEPH (T. GREINER.)



Tomatoes in Winter.—Tomato growing is always an interesting subject to me, not only because the fruit is as palatable (I might say as delicious to my taste) as it is handsome and attractive, but also because it can be utilized in so many ways, and finally, because there is money in it if you only know how to get it out. Even tomato growing in open ground can be made highly profitable, both for the market gardener and the grower for canning establishments. But all this is nothing compared with the forcing of the crop under glass.

In Bulletin 28 of the Cornell University Agricultural Experiment Station (Ithaca, N. Y.), Prof. L. H. Bailey reports the results of experiments made with the tomato as a winter crop. This is to me one of the most interesting bulletins sent out by any experiment station for a long while, and I only wish I could quote the whole of it instead of having to restrict myself to making some short extracts. Those of our readers, however, who take an especial interest in the forcing of tomatoes, or wish to engage in it, should try to get the bulletin by making proper application to the station.

Winter tomatoes, says Prof. Bailey, always find a ready sale at prices ranging from forty to eighty cents per pound. The crop demands a high temperature, an abundance of sunlight and great care in the growing, but the profits, under good management, are correspondingly high. A light and tight house is essential, and it should be high enough to allow of training the plants. It should be built north and south, and large glass should be used. Direct and strong sunlight is one of the most important requisites. The temperature should be kept at about 60° to 65° at night, and from 70° to 80° during the day, or higher in full sunshine.

As it requires from four to five months to bring a forced tomato plant into bearing, the seed sown by the middle of August will give plants fit for transplanting early in September, ready for planting in the tomato-house by middle of October, and to begin bearing late in December. A favorite method is to grow them over brisk bottom heat, either in beds or boxes. The return pipes may be laid close upon the ground, and covered with a low platform or bench made of three-inch slats with

inch spaces between them. Boxes, eighteen inches square, are placed ten to twelve inches apart, and four plants set in each box of the size mentioned. The boxes are one foot deep, and have one or two narrow cracks in the bottom. A good layer of potsherds, or clinkers, is placed in the bottom for drainage, and the box then filled two thirds full of soil. When the fruit begins to set, the box is nearly filled with rich soil and manure.

Plants are trained to single stalk and supported by a strong flax cord, size of wool twine. A single strand runs perpendicular from each plant to a horizontal wire or rafter extending lengthwise the house under the roof. The plant is secured loosely to this support, at intervals of a foot or so, by means of some broad and soft cord, as bass or raffia. As soon as the fruit becomes heavy the largest clusters will need to be held up, which may be accomplished by passing a sling of raffia under the middle of the cluster and around the joint of the plant. During the earlier growth of the plant the atmosphere must be kept moist by free watering, and on sunny days by wetting down the walks. When the flowers begin to appear, the house should be kept dry to facilitate pollination. Pollen is discharged most profusely in dry, sunny days. In the short, dull days of winter some artificial aid must be given to flowers to enable them to set. Tapping the plants sharply several times during the middle of the day with a padded stick is perhaps better than nothing; but it will pay to transfer the pollen by hand during midwinter. Knock the pollen from the flowers, catching it in a spoon or similar receptacle, and then dipping the stigmas of the flowers into it. When the flower is fully expanded and somewhat past its prime, and the atmosphere is dry enough, the pollen falls out readily, or when the flower is lightly tapped with a lead pencil.

When the winter crop is well along, one or two new shoots may be trained out from near the base of the plant for a second or spring crop. Liquid manure should be given once or twice a week, or a fresh mulch of old manure be added. Shoots which were about a foot long when the old tops were cut down the first of March, gave ripe fruits the first and second weeks in May. Prof. Bailey obtained from one and one half to two pounds of fruit per stem, or plant, in midwinter, and about twice as much in spring, or an average of over three pounds for the season. This amount is produced on one and one half square feet of space. Lorillard and Ignotum seem to hold the first place among the varieties tried, and Volunteer is scarcely inferior. Golden Queen is the best yellow. Dwarf Champion proved unsatisfactory.

The tomatoes are usually marketed in small, splint baskets holding from four to ten pounds of fruit. Each fruit is wrapped in tissue paper, and if to be shipped by rail, the baskets should be lined with rolled cotton. In midwinter the fruits averaged from one and three fourths to two ounces each, but in late March and April the average will rise to three ounces or more. The weight of the best fruits can often be increased by cutting off the smallest and most irregular ones. Of course, the crop has also its enemies, both among insects and plant diseases, and these must be fought by the proper means. I will still add that one day in January, three years ago, while in the office of the *American Garden*, in New York City, Mr. Gardener, the originator of the Lorillard tomato, brought in some specimens of that variety which were excellent, and of higher quality and greater solidity than I have seen in any tomato before or since. It was a feast fit for the gods, and well calculated to make a person enthusiastic as to forcing tomatoes.

Three Important Clover Insects.—In Bulletin No. 2, Vol. IV, second series, of the Ohio Agricultural Experiment Station, Prof. Clarence M. Weed tells of the clover-root borer, the clover-seed midge and the clover-hay worm—three insects that often do considerable damage to the clover crop. I have seen the first named, the clover-root borer, in great numbers, a few years ago, and whole clover fields almost entirely ruined by them. Prof. Weed recommends to mow the seeded land but once, and to

pasture or plow under the abundant second growth. In this way the crop is out of the way before the injuries of the borer become manifest.

Clover fields infested by the clover-seed midge (a small, orange-colored maggot that develops in the clover heads at the expense of the young seeds, and is the offspring of a small, two-winged fly, similar to the Hessia fly in appearance) are at once distinguished by the unnatural condition of the heads at blooming. These are green and dwarfed on account of the undeveloped florets. Mow the field when the green heads are just forming, leaving the partial crop thus cut on the ground as a mulch and fertilizer. A new crop of blossoms is then produced, which comes between the regular crops and also between the two broods of the midge. This method has been practiced with excellent results by farmers in Ohio. Another remedy usually recommended is cutting the first crop about ten days earlier than usual and pasturing the fields in spring.

The clover-hay worm infests old clover hay, sometimes in large numbers. It webs the dried stems and leaves together and feeds upon them. The adult is a very pretty little purple and golden moth, which deposits eggs upon such clover hay as it has access to. The remedy is to clean out hay-mows very thoroughly each summer, and to burn hay that is thickly infested by the worms. Never put up new stacks on old foundations until all of the leavings of the previous season are removed.

A DAIRY WELL.

For ordinary use, the well should be dug six feet by four square, with a gutter or groove down one side eighteen inches square. It should contain two or three



A DAIRY WELL.

feet of lasting water. It should be in easy reach of the kitchen, and attached to the house, if possible. The curbing should be no larger than the well. A platform, which fits inside of the well, slides up and down between two timbers, which rest on the bottom of the well, and are long enough to reach up three feet above the curb. These two timbers should be planed.

The framework of the platform has a board nailed on each side of it, forming a groove which fits on the upright timbers at each end of the well. This makes it rigid and keeps it level. The circular black spots on the platform represent openings for vessels. The piece that holds the wheel, over which the rope passes to the windlass, is prolonged so that when the platform is just even with the top of the curb, an iron pin is inserted through it and the top bar of the platform frame, and holds it there. There is another rope and two wheels. This rope has a heavy weight attached to assist in raising the platform from the bottom of the well with heavy loads. These weights go down into a box formed of four wide planks, which occupy the gutter, or groove. One lid opens up against the weight-box, and fastens with a thumb-button. The other is hinged so as to hang down by the side of the curb when open. —*Gleanings in Bee Culture.*

RURAL HOMES.

Of all places on earth, the home should be inviting. This is especially the case in homes where there are children. The taste, the character, the habits, the inclination, and quite frequently the destiny of a child is largely influenced by the surroundings of his early home. How important, then, that these surroundings should be pleasant! How sweet should be the memories of that childhood home! Knowing these facts, how strange it is that so many parents make little or no effort to beautify their homes and thus add to their own and their children's happiness. Year after year is spent in a wild race for wealth. For what? For uneducated, unrefined and sometimes unscrupulous children to quarrel over.

One is frequently impressed by the want of taste exhibited in the home and surroundings of the average farmer. Visit city, town or village and the homes of the residents are, as a rule, neat and tidy in appearance and surrounded by a beautiful and well-kept lawn, dotted here and there with trees, shrubs and flowers. Everything shows the influence of an educated taste. It is true there are many uninhabited tenements, but where the occupant is the owner, as in the rural districts, it is the rule and not the exception to have attractive homes. Why is it thus? Is it because of a want of means? Willing hands can easily provide some of the necessary means. Some things, at least (and thankful I am that this is the fact), can be done without money. Is it from a want of time? Many odd moments are wasted that might thus be put to good use. Is it from want of opportunity? Few farm homes are so situated that some opportunity for adornment is not to be found. Is it from a want of taste? Then cultivate the taste by little efforts and by observation, and see how quickly it will respond to the culture.

It is wonderful how much a little paint and whitewash can do towards brightening up a country place. These will not only add to the appearance, but to the healthfulness, also. It is poor economy to permit buildings to go unpainted. The money thus saved would not begin to repair the damage done by the hot sun and the beating rain. Buildings kept well painted will not only last much longer without repair, but will lend an air of cheerfulness to the place that will have a beneficial effect on the occupants.

Frequently thistles, docks and other noxious weeds are permitted to occupy the ground and crowd out the grass and shrubbery. A beautiful lawn adds greatly to the appearance of a home. It requires some care and attention, but is well worth all the trouble. Frequent cutting in wet weather, and some protection in dry, with care in keeping down the encroaching weeds, and a beautiful carpet of living green is assured.

Another essential thing is an abundance of shade trees about the grounds. They are not only essential to beauty, but form a protection from the cutting winds of winter and from the burning rays of the summer's sun. A mistake is sometimes made in planting large trees too near the buildings. Too much shade causes dampness and is not desirable. A closely-set clump of trees and shrubs form a pleasant background, but this should be a few rods distant from the buildings.

Sometimes accumulations of lumber, worn-out machinery, etc., are scattered about the premises and permitted to detract from the appearance of the surroundings. Some of this may be utilized for repairs by the practical farmer who is handy with tools, and should be stored away in some out-of-the-way corner where it will not be permitted to lend an appearance of general neglect to the entire place. Useless debris should be turned into stove-wood or carted away to some ravine.

Many farmers—the number is perhaps growing smaller—are accustomed to leave their plows, wagons, cultivators and sometimes even the pleasure carriage, standing in the barn-lot. This is doubtless better than leaving them in the field, especially if there be plenty of shade, but is detrimental to the implements and not at all pleasing to the eye. Every tool should be safely housed, if possible, when not in use. I have a mowing machine that has cut an average of fifty or sixty acres each year for fifteen years, and a neighbor remarked last year that it did

better work than many new machines. It has usually been under shelter except when in action. Machinery costs money, and it is economy to preserve it.

All these things add to or detract from the general appearance of the rural home. While not essential to success, it is essential to beauty. It is within the means of every one to make some improvement. Passing observers will be favorably impressed. The owner will be more cheerful and contented, and what is more, his boys will not be so desirous of leaving the farm home for a home in an unknown city. Encourage the boys to plant trees and shrubs, clean up the rubbish and smooth down the rough places in the lawn. Do not compel them to do this, but set them an example and they will fall in line.

My farm was purchased six years ago. Each year since some effort for improvement has been made; a building erected, ditching done and trees planted. This year nearly four hundred trees—fruit, forest and evergreen—were planted. The plantings are mulched with straw or well-rotted sawdust, and the loss is quite small. Being lone-handed, the improvements are not so great as would be desired, but nevertheless noticeable.

A neighbor living within two miles, purchased his farm some twelve years ago. It was then about the most neglected-looking farm in the county. Today it is the most attractive. It required time, patience and labor, but then the improvement was magical. The mind of the passing traveler is relieved from the monotonous neglect so generally prevailing, and if a farmer himself, is no doubt prompted to make some improvements in the surroundings of his own home.

Let the farm home be made beautiful and inviting. Life should not all be spent in search of wealth; neither should we be satisfied with the bare necessities of life. Let the higher faculties of the intellect find food for activity and development. Those things which elevate the taste also elevate the man. The beautiful should be enjoyed along with the useful, that the mind may find necessary recreation and the man be fitted for the home he hopes to enter in another world. The life within and the comforts throughout a home all combine in fixing in the memory of boy or girl some of the sweetest scenes of a long life. Would that all might enjoy such privileges and enter the active world with their beneficial influences.

JOHN L. SHAWVER.
Logan county, Ohio.

SOME FACTS ABOUT RUSSIAN APPLES.

PROF. J. L. BUDD, IOWA AGRICULTURAL COLLEGE.

HARDY FRUIT BUDS AND BLOSSOMS.—In this vicinity apples are so scarce that common fall varieties bring one dollar a bushel at the groceries. Yet in the Russian experimental orchard on the college farm, dozens of varieties have been laden with large, smooth and handsome fruit. This orchard gave us fully 600 bushels year before last and about 300 last year; but the shortage last year came from the fact that the extreme drought of the former three years preveuted varieties heavily laden last year from fruiting last season. Even the Duchess trees, that were full in 1889, did not show a specimen in 1890. This is stated in confirmation of the fact that the best Russian apples, pears, cherries and plums are harder in fruit buds and blossoms than the west European fruits or their American seedlings. Prof. Goff makes some statements in regard to Russian apples which may probably be extended.

LIABLE TO BLIGHT.—He correctly states: "Many Russian varieties that resist cold, suffer severely by blight in summer." This is founded on Wisconsin experience with the earlier varieties imported from St. Petersburg. Yet of these it may be said that many blight as seriously as the Siberian Crabs, and many others in the most unfavorable positions blight as little as Duchess or any one of the so-called American apples. Grounds in Iowa, where the Yellow Transparent cannot be profitably grown on account of its tendency to blight, we have bearing trees of over 70 varieties from St. Petersburg that blight as little as the Duchess, and some that have as yet never shown a trace of the disease.

Again, the varieties from the Volga

Provinces, as a rule, are less subject to blight than any of the west European sorts or their American seedlings.

NOT OF HIGH QUALITY.—Prof. Goff says: "Few of them are of high quality." On this point Dr. Hoskins wrote: "You and I know better." The Russians grow many varieties of large, smooth, acid apples exclusively for culinary use. Among the varieties classed by Schroder for dessert use are many for all seasons which Downing would have classed as "very good," and a few which he would have called "best."

FEW OF THEM WILL KEEP.—The sentence reads: "Few of them are of high quality, and most ripen early in the season and keep poorly during winter." This is especially true of all the varieties coming from a point as far north as St. Petersburg or Moscow. Yet among these there are quite a large number of really good keepers on the north limit of their possible growth, which will prove of untold value to the cold North, where a home-grown winter apple is now hardly known. Our list from Moscow only represents the varieties grown in north Russia in part. Dr. Schroder collected many varieties for our use from points in the South-east, where deer corn ripens as perfectly as in central Iowa. These varieties, as well as those we imported later from Bogdanoff, Orel, Voronezh and the lower Volga region, ripen with us in central Iowa about as they did in their natal home, as noted in our bulletin of 1890. Winter before last we were able to show many of these on the 25th of January, in as perfect condition as Ben Davis, Willow or Baldwin.

EXPERIMENTAL WORK.—I write this to impress the thought that as yet it is experimental work. Our work has been to sift the great list and sort out by actual trial, across the continent on our northern borders, the relatively few sorts coming nearest to our ideal of hardness of tree, productiveness and quality of fruit for all seasons. The recent remarkably trying seasons at the West have favored the work. In twelve years we have been able to reach conclusions by comparisons of reports from our many trial stations, which in ordinary seasons could not have been reached in a lifetime. Hence the positive statement at this time.—*Popular Gardening.*

FIRST BALES.

Any time after July 1st we may expect the announcement in the newspapers of the arrival of the "first bale of new cotton" in some of the southern Texas towns. It is regarded as quite an honor to be the producer of the first bale of new cotton, and the honor is by no means an empty one, for it generally brings a price far in advance of its true market value.

The first bale is the recipient of special honor from the time it is harvested. The ginner usually gins it free of cost, and the railroad that carries it to Houston or Galveston generally "deadheads" it through. The board of trade usually takes an interest in it, and if it does not bring as good a price as they think it should, a special cash premium is voted to the farmer who raised it, or to the shipper who sends it in.

Texas generally sends in the first new bale of the United States, though Georgia has a few times taken the lead. Here is a partial list of the first bales that Texas has produced:

1879—First bale received at Houston July 9, and sold for \$94.50.
1880—First bale received at Houston July 12, and sold for \$305.
1881—First bale received at Houston July 11, and sold for \$425, the largest price ever paid in Houston for a bale of cotton.
1882—First bale received at Houston July 5
1883 " " " " 8
1884 " " " " 22
1885 " " " " 22
1886 " " " " 18
1888 " " " " 6
1889 " " " " 18
1890 " " San Diego " 7
1891 " " " " 4

Thus it is seen that this season has beat all past records on the first bale. Last year Georgia beat Texas by two days, sending a bale of cotton to Albany July 5th, while Texas did not send one until the 7th—to San Diego, Duval county. Cotton has only been raised in Duval a few years, and we may expect to hear of a bale coming from there by the first of July before many more crops are made. It is about one degree further south than

Dewitt county, where Mrs. M. Housman lives, who has heretofore sent in more first bales than any other cotton grower in the southern cotton belt.

The 1890 first bale was sold to an agent of an English cotton manufacturing firm for \$100, but the Galveston Cotton Exchange added \$100 more to the price. Its weight was 620, an unusually large bale, and the price per pound was very nearly 32½ cents.

From now until the middle of September the papers throughout Texas and other southern states will be giving notices of "first bales" from the various counties of the cotton states. Nearly every town gives a premium on the first bale sold in the place, but the highest honor is of course in raising the first bale of the entire South.

DICK NAYLOR.

SHEEP AT THE COLUMBIAN EXPOSITION.

Not a little anxiety has been felt concerning the sheep show at the World's Columbian Exposition to be held in the city of Chicago in 1893. Very little has been seen or heard as to the classification and showing of sheep at this, the grandest exhibition of the national products of the countries of the world. There need be no anxiety on this or any other question as to what will be done in the most pushing, wide-awake city on the globe, when the time arrives. The work is in most excellent hands. It may seem that no haste is shown in giving out the plans that sheepmen would like. But the best man has been selected to the department of live stock, and so well and wisely has he marked out the various live-stock departments that no apprehensions need be felt by any one.

A little while ago it was a wonder if a man could be found wide enough and high enough to fully comprehend the length, breadth, depth and height of a world's sheep show. Plenty of men could be found to plan and carry out a county, state or even a national sheep show; but a world's sheep show meant a little more than any of us could conceive of. There were so many points to consider and so many things we esteemed valuable to us as American breeders that we had to forget when we asked the other nations to come and join us in a sheep and wool show in 1893, at our own homes.

We have for once in our lives to be very liberal and generous to the rival sheep raisers of the whole world. We expect to meet the very men and the very sheep that we feel are hustling us in our own wool markets. We must show them exact justice, if not a little more, seeing they are our guests. The question is not alone what do we want, but more: What do these foreign friends want and expect when they bring their sheep to our world's fair? They come here to show us what they have, and allow us to compare our sheep with theirs. We need not fear the test any more than they will. It is to be a generous, friendly comparison, alike beneficial to us all. They will be there if we assure them a fair and equal chance on the merits of the sheep that suits their purposes and conditions. All these things will be done by the management of this world's fair, and everything will be done well and announced in due time.

With such liberal encouragement and fair classification, the people of the world will come with the best sheep they have, and laying aside all prejudices, will apply themselves to the opportunities we nor they ever had before of studying sheep and wool growing. Much will be learned and much will be unlearned while we hold on to preconceived notions of the past.

One well known in this country as authority on all wool growing subjects suggests a monster wool growers' meeting at Chicago during the world's fair. Had he said a monster sheep growers' meeting he would have been up with the times, at least in the light of the past five years of wool growing in this country. Surely, the United States has had an experience that fits them for lessons in sheep and sheep raising on a new and progressive system—one up with the times and demands surrounding us. Conceited as we have been, we shall find much that we had thought not worth the time to learn.

It will be the treat of a lifetime to meet the sheep of the American republics, of Australia, New Zealand, Cape of Good Hope, of Asia, Russia, France, Germany, Austria, Sweden, Holland and England. It

may be presumed each will fully and properly report the numbers, breeding and management, together with the natural and artificial advantages of their respective countries for raising sheep and for wool growing. With the sheep before us, and these helps at understanding the sheep husbandries of the nations, a better intelligence will come to our people than has existed heretofore.

Nothing could be more timely. This is just what we have needed. This will be a monster sheep meeting that may knock some of the conceit out of us and put us away ahead on the road of progress. We shall perhaps find then, if not sooner, that a wool husbandry depends upon conditions and facilities peculiar and changing as agriculture and civilization are developed. Nor will the lessons of the World's Columbian Exposition be learned by our own people alone. No doubt the world will appreciate what we will have to show them in breeds of sheep we have received from them in the past, in qualities of carcass and fleece, especially those which they are competing with in our markets. They no doubt will see it to their advantage to buy our sheep, that they may the more successfully compete in the wool markets of the world with each other.

This may be taken as a small outlook for the world's sheep show in Chicago in 1893. This one point at least may be depended on: There will be nothing small about the arrangements and management of anything at Chicago. The sheep industry will be equal to any of the industries in special, intelligent and careful arrangement, and cannot fail to be successful and eminently useful to the world's sheep husbandry. It is all in good hands, and no one need fear a failure. Many of the sheep are yet to be born that will compete for place and prizes. The peculiar fittings so usual to show rings, it is hoped and believed, will be shut out. Good sheep, not "artificial tricks," will be worthy of place. Plain, honest, practical sheep are what the people can understand. Such sheep require no expert knowledge of breeders' unscrupulous skill in showing sheep. This fair is for the people, not for breeders; for the world, not for a neighborhood; for larger information, not for a few dollars in prize money.

R. M. BELL.

A CHANGE FOR THE BETTER.

Scrub farmer, feeding nothing but hay and straw in a cold barn, what have you to say to the facts given by Mr. J. D. Smith, of Delaware county, N. Y., who, by changing his system of farming, made the same farm produce 8,304 pounds of butter, when 2,250 pounds was the extent when he lived—as many are living yet—in the "dark ages." As a rule, too, the men who have cows that produce for them 250 pounds of farm butter per annum, don't get more than a "York shilling" per pound for it; when by the time he learns how to make a cow yield 250 or 300 pounds per annum, he has also learned to get two "York shillings" per pound for it—largely because he makes the most of it, when butter is scarce and high. The butter income of the same farm on the first basis is \$281.25; on the latter basis, \$2,076.00. Borrowing money—even of the government, at 2 per cent—to conduct the first kind of farming, would bring a man to bankruptcy at the last.—*Hoard's Dairyman.*

A new strawberry insect, a close relative of the grape vine flea beetle, attacks the foliage in Florida and Indiana, and the grape in Arizona.

The common field cricket will eat strawberries.

My Liver

I had for a year caused me a great deal of trouble. Had soreness in the back, little appetite, a bitter taste in the mouth and a general bad feeling all over, that I could not locate. Have been taking Hood's Sarsaparilla for the past three months with great benefit. I feel better, the

Bad Taste in the Mouth

is gone and my general health is again quite good. No longer feel those tired spells come over me as I formerly did.

Hood's Sarsaparilla

is certainly a most excellent medicine." MRS. I. B. CHASE, Fall River, Mass.

N. B. Be sure to get Hood's Sarsaparilla.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

SHADING CELERY.—The greatest obstacle to healthy, vigorous growth in celery plants, just set out in permanent bed, or yet to be set out, is the burning sun of midsummer and early fall, especially if its effects are given still greater emphasis by accompanying drouth. If a little shade can be provided in some way, the plants will grow even with more thrift than if given extra stimulus in the way of manuring, and perhaps irrigation. Perhaps we can manage to provide shade by setting our plants in a row on the north side of a row of corn, or other tall growths, or in the center between two rows of trees in an orchard of from two to four years' planting. A row of White Plume celery in my garden, planted out early in June, and having the benefit of a very slight shading by a row of tall-growing peas, has done better than another planted in full exposure. My later celery (for winter and spring use), some of which has been planted nearly a week and some is yet to be set out, is given very effective shading by means of boards set on edge along the west side of the rows, at an angle of fifty or fifty-five degrees, as shown in accompanying sketch. The rows in my garden are north and south, which is owing to the "lay of the land." I would prefer to have them east and west, and to have the boards on the south side, thus securing shade for the plants during the middle of the day, and sunshine, mornings and nights. I am quite satisfied with the effect as it is, however; for my plants,

by earthing up, the rows ought to be at least four feet apart.

CELERY CULTURE AT THE SOUTH.—A Florida subscriber, J. W. Barclay, of Jacksonville, adds the following information to some remark of mine, made some time ago, in reply to an inquiry from Louisiana: "I got my plants on October 25th of last year from Kalamazoo, and set them in the ordinary way; that is, in trench, well enriched with stable manure, then filling up as the plants grew, watered frequently with a solution of nitrate of soda, $\frac{1}{4}$ pound to 48 gallons of water. The plants grew finely, and were blanched by putting conical caps over them made of some heavy paper, and held together with an ordinary pin at the top, and by some soil drawn against them at the bottom. This was a complete success. Usually, celery here has a tendency to go to seed, and when given a chance will propagate itself like a weed. The paper used in making the caps was obtained from a printing office, and had been used for wrapping bales of their paper."

ROTATION FOR CABBAGES, ETC.—A subscriber complains of clubroot in his cauliflower, and says it ruins a large share of his and his neighbors' crops. Every grower of these vegetables should accept it as the very first principle in the cultivation of plants, belonging to this family of plants (*Brassica oleracea*), that strict rotation is absolutely necessary for the avoidance of many inconveniences and losses. When plants are grown on fresh soil, and transplanted to fresh soil, they will be free from clubroot, and less liable to insect attacks than when grown repeatedly in succession on the same soil. Soil that contains a large percentage of lime often brings successive crops that are entirely

is the best disposition that could possibly be made of lettuce that cannot be used for the table. Let poultry, if kept in confinement, have every bit of it. They will eat great quantities every day, and be benefited by it. It always seems to stimulate the egg-mill.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Twig-Blight.—A. M., Parallel, Kan. Your trees are affected by what is called twig-blight. There is no known remedy. The most rational treatment is by cutting off the diseased portion down in the healthy wood, so as to be sure to get all the disease. Burn the part cut off. This disease is caused by a minute fungus which grows in the tissue of the plant. Thus far no practical means has been found to combat it.

Fire-blight on Apple-trees.—M. J. J., Culver, Kau. Your apple-trees are attacked with fire-blight, a disease common all over the West and South. It is periodical in its attacks, seldom doing serious injury many successive years. The diseased branches should be cut off down to healthy wood and be burned immediately. Some varieties are more liable to it than others; the crab apples are especially liable.

Rust on Snyder Blackberry.—J. A. B., Bartlett, Mo. I do not know a variety of blackberry that is less liable to rust than the Snyder. If you cannot get a fair growth on account of the rust, you had better discontinue growing blackberries for a few years, first destroying every wild and cultivated blackberry plant growing near you; after that you could probably grow them all right. No remedy has yet been found for this pest. In starting a new lot, be sure to start with healthy plants free from rust.

Web-worm on Gooseberries.—M. A. H., Fairview, Wash. The insect you refer to is probably the fall web-worm. The simplest way of getting rid of it is to remove the infected branch and bury or burn it. Since the worms are all the time enclosed under a web, they cannot be touched by poison like the common tent caterpillar, which leaves its nest to feed. The latter can be destroyed by poisoning the foliage with Paris green. A little time spent in gathering the nests of the fall web-worm suffices to keep it in check.

Strawberries Not Bearing.—J. W. W., Ferron, Utah, writes: "Last spring I set out a patch of strawberries. The soil was well manured, and they grew well. In the autumn I covered them with a coat of straw manure. In the spring I spaded it under well. It was in April. They commenced blooming the first of May and continued up to the latter part of June, but the fruit did not set."

REPLY:—It may be that all your plants were pistillate, and you had no staminate kind near by to furnish pollen. This is a common mistake made by beginners. It is also possible that the blossoms were injured by frost or severe weather. You had better give me, if you can, the name of the variety you set out.

Pear-blight.—L. L., Boonville, Mo. Your pear-trees are attacked by pear-blight, a disease practically the same as apple-blight. It is very abundant this year, and, like the apple-blight, is periodical in its attacks on the trees. I have found it best to cut off and burn all the diseased wood at once; dig around the trees and manure with potash and phosphoric acid or unleached wood ashes, but never with nitrogenous manures. Do not grub out the trees because they look bad when cut back, for they will frequently renew themselves and produce good fruit for many years afterwards.

Fruit Culture.—C. A. S., Auburn, N. Y. asks: "(1) Would peaches, strawberries and blackberries pay? (2) Is there any money in gooseberries? (3) What is fruit land worth along the Hudson river?"

REPLY:—(1 and 2) Yes, if they are properly cared for in a favorable location. (3) From \$1.75 to \$300 an acre, its value depending on the quality of soil and location. There are so many things entering into the successful growing of fruit, from the adaptability of the soil and location to the adaptability of the man to the business, that I would suggest that you visit along the Hudson this summer, taking in such fruit-shipping places as Marlborough and Cornwall. A personal visit would do more for you than anything that could be written.

UNKNOWN PEARS.—W. W. G., Occoquan, Va., writes: "A nursery that filled my order for several hundred pear-trees sent me one hundred 'Cocklin,' which I did not order. Is the Cocklin a good variety or not? If not, I desire to know the quickest way to change them into the Idaho or Kieffer variety by top grafting or budding. They were planted a year ago, and are about eight feet high."

REPLY:—I do not know, nor can I learn, of any such pear as the "Cocklin," and would be glad to hear from any one who does. I would not want to allow many pears to grow of an unknown or untried kind. If you decide to change them, and they are young and thrifty, it would probably be best to bud them this year. If not in good condition, better graft next spring. In budding, put buds into all branches near the top of the trunk.

Strawberry Runners.—Mrs. W. B. H., Fishkill, N. Y. The runners of the strawberry plants set this spring will be just right to set in August, or even the first of September.

Great care should be used not to allow the roots to even have the appearance of being dry, while being transplanted. If the weather is dry, plow your land the same day you set your plants, and water each plant. A common method of facilitating August planting is by placing 3-inch flower-pots, filled with very rich soil, in the ground under the runners just as they commence to send out the roots. After the pots are filled with roots they may be taken up and the plant set out where it is to grow. This makes extra labor, but the increased growth pays well for it.

Book on Fruit Growing for Nevada Wanted.—Mrs. E. A. L., Paradise, Nevada. There is no one book that will give you the information you wish. I would suggest that you use Geo. P. Fuller's book on small fruits, and that you get "Practical Fruit Growing," by S. T. Maynard. These are both published by The Orange Judd Co., of New York. Besides these, you had better get two or three of the latest volumes of the reports of the state horticultural societies of Minnesota and Ohio. These can be obtained, at a low price, of the secretaries of the societies. This will give you a wide range of reading for very little money, and, if studied, will put you in a position to understand the work so that you can experiment successfully.

Currant Cuttings—Longfellow Strawberry.—C. J. D., Hockessin, Del. Currant cuttings should be made as soon as the wood is ripe, which is as soon as the terminal buds are strongly developed, and the leaves separate easily or fall off. This is generally some time in August. Make them six or eight inches long of this season's wood only; put in six inches deep in good, retentive garden loam, and press the soil around them until they are solid. They will then have small roots on them by winter and will grow finely next year.—The Longfellow is self-fertilizing, but is not so firm or productive as several other varieties. If, however, it is doing well with you, it may be that your locality is well adapted to it. Probably you had better use some more prolific kind.

Sulphur for Borers.—F. S., Mitchell, S. D. If you will open the holes you made in your ash-trees you will find the sulphur the same as when you put it there. It has had no effect whatever upon your trees. I do not know how such a method for preventing the work of the borers originated, but I have known of its being used repeatedly. The forester in charge of the Boston parks, a few years ago, did the same thing, and yet it has been shown repeatedly to be perfectly useless. He was ridiculed in the papers for his ignorance. Downing relates that the thing was tried by some gardener many years ago, and that years afterwards the trees were cut down and the sulphur was found as perfect as when put in. From what we know of plant life we know it does not enter into the circulation of the tree, and cannot affect it.

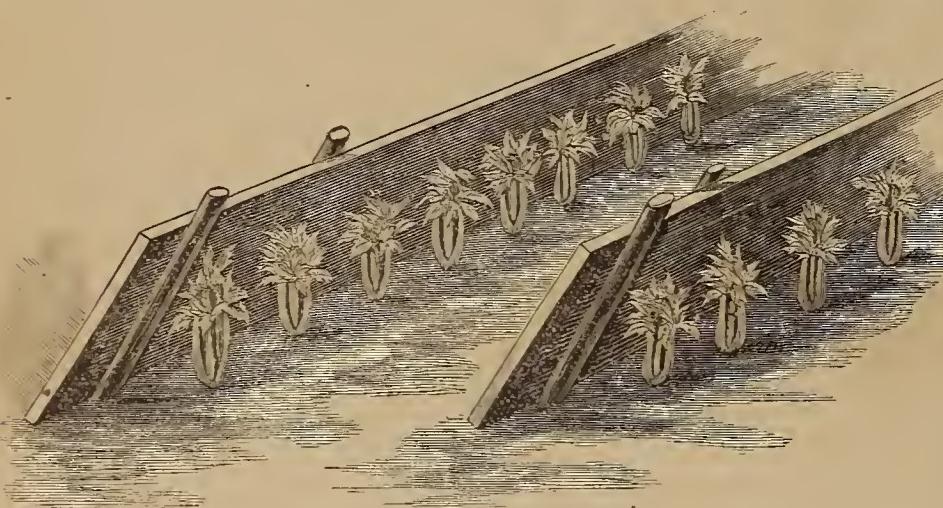
Fig Culture in the South.—J. M., Sabina, Ohio. As yet, the raising of figs in the southern states has never been a commercial success. There has been no trouble about raising them in large quantities. In some localities so many are raised as to glut the markets. It would appear that if the growing of figs can be made profitable in California, it ought to pay in the Gulf states. Figs may be propagated from seeds, cuttings, layers, suckers or by grafting. The common method practiced in the South is by cuttings, made of well-ripened young wood in spring, just before the buds start. You had better buy rooted plants at some southern nursery. Competition with the cheap labor of the fig-growing Mediterranean countries is very severe. It is said that there is a good, probable profit for any one who will go into the business of shipping fresh figs to northern markets, but this is a difficult undertaking and requires much careful management.

Best Strawberry, Blackberry and Raspberry.—O. D. K., Marblehead, Ill., asks: "What is the earliest variety of strawberry, and what variety is the hardest and best for shipping; and what is the earliest variety of blackberry, also raspberry, and which kind is the most prolific? I am going to start a small fruit farm and want the earliest of each kind, and then another variety of each kind that are the most prolific and best for shipping."

REPLY:—The Warfield No. 2 has to-day, perhaps, more friends among horticulturists than any other variety. It is certainly the highest esteemed of any new kinds. It is wonderfully productive, early and hardy. It is pistillate, but I am not so sure as to the best variety to put it with to furnish pollen. I am using the Michel's Early, because it produces a great abundance of pollen, and I consider this a point of first importance. Its fruit, however, while produced quite freely for a bi-sexual kind, is of very poor appearance, though the quality is very good and it is a good shipper. Probably the earliest hardy variety of the blackberry is the Suyder; of the black raspberries, the Souhegan; of the red raspberries, the Marlboro. These are all prolific and hardy kinds, and adapted to your section and for shipping; but please remember that if some other varieties than those recommended are doing well with growers near you, you had better go slow about trying any new kinds.

CATON STOCK FARM.

A. L. Thomas, Sup't Caton Farm, Joliet, Ill., remarks: "I inclose you amount for six bottles of Quinn's Ointment. After one year's trial must confess it does all you claim for it." For Curb, Splints, Spavins, Windpuffs or Bunches, try it. Trial Box 25 cents, silver or stamps. Regular size \$1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.



with a good watering, night after setting, and with the shade given them after 11 A. M. and until night, never wilted, and apparently grew right along without check. The boards are held in position simply by little stakes driven into the ground slantingly. As the plants are set six inches apart in the rows, a board fourteen feet long (width may be from eight to twelve inches) will thus shade about twenty-eight plants, and ten or a dozen such boards will be sufficient to shade a pretty fair supply of celery for an average-sized family. There are probably few farms where all the old boards needed for this purpose could not easily be found or secured. Recourse to this subterfuge will make success with celery pretty sure. In September the boards may be thrown back, the plants hoed and handled preparatory to bleaching, and perhaps blanched by the use of the same boards, setting one line on each side of the row, thus encasing the plants between two upright boards so that only the top leaves are sticking out above. The boards employed for shading will, of course, be enough for half the patch only. The other half may be bleached in the same manner, either by using more boards or by using these boards a second time, after the first half of the patch has been sufficiently bleached for use, and is taken up. Otherwise the second half may be bleached by earthing up in the old familiar style.

I am hastening the bleaching of part of my White Plume celery by wrapping each plant in several thicknesses of ordinary newspaper, held on by a small rubber band, and of another part by putting one of my blanching tiles over each plant. Celery, to be managed thus, or to be blanched by boards, may have the rows as near together as indicated in my sketch, say two or three feet; but if to be blanched

Our Farm.**GOOSEBERRY MILDEW—HOW PREVENTED.**

This FUNGUS has for the past three years been successfully combated. At the New York Agricultural Experiment Station, Geneva, fine crops of gooseberries have been grown entirely free from mildew. The success has been so marked as to attract the attention of a number of leading fruit growers. The practice at this station is to begin spraying as soon as the young leaves unfold, and continue the spraying at intervals of from eighteen to twenty days. In case of frequent, heavy rains, it will be necessary to spray more often. The fungicide used is potassium sulphide, liver of sulphur; formula, one half ounce dissolved in one gallon of water. If hot water is used, the sulphide will dissolve more readily. As commercial liver of sulphur costs but little, from fifteen to twenty cents per pound, and one gallon will spray ten or twelve large bushes, if applied with a force-pump and spraying-nozzle, it will be seen that the largest cost will be that of labor. If spraying is done with a syringe on a small number of plants, the amount of liquid necessary will be increased, of course; but, however lavish one is with the solution, the beneficial results will more than compensate for the outlay. The few fruit growers who continue to grow gooseberries claim that they are one of their most remunerative crops, as the markets are almost always destitute of them, and buyers are willing to pay almost any price for bright, clean fruit. To test the matter of prices for superior fruit, a five-pound basket of several varieties was picked at fruiting time last year and taken to a leading grocer of Geneva, who sold them as follows: The basket containing the large varieties bringing fifty cents, those containing the medium and small varieties bringing forty cents. The grocer stated that he could dispose of a large quantity at those prices. The average yield of three-year-old plants was over five pounds per plant, and as by setting plants four by four feet, 2,722 can be grown on an acre, the results would have been a yield of 13,610 pounds, which, if sold at twenty-five cents a basket, would have brought the sum of \$685. Surely, there is money in gooseberries well taken care of and kept free from mildew. In conclusion, it may be well to say that it is often claimed for certain newer varieties that they are mildew proof; but experience goes to show that, while some varieties are better able to resist the attacks of the mildew, sooner or later they will become afflicted as badly as older sorts.—*New York Agricultural Experiment Station.*

THE FARMER'S LIBRARY.

What would a farmer do with a library? Consult it, of course.

When does he have time to read?

Through the long winter evenings, during the noon hour while his team is resting, and on the disagreeable days which he now spends at the village store whittling and talking politics.

What shall he read?

Good agricultural papers and books devoted to his calling, as well as the higher class of miscellaneous literature, including history, biography and the sciences.

How shall he purchase them when times are so hard?

Stop using tobacco, give up the social glass and invest the savings in books and papers.

Oh, you must grant a man some luxuries for personal gratification.

Which conveys the most pleasure, a moment's selfish gratification in the use of narcotics, or years of companionship with good literature for yourself, wife and children?

Well, but my tobacco does not cost much, and it would not go far towards the purchase of books.

How much? Could you count on a supply at ten cents per week? Well, suppose you count that sum at compound interest from the time you were fifteen until you attain three score and ten, and it amounts to about seven thousand dollars—a good farm. But, suppose you average one dollar per week for selfish luxuries, it would

then amount to seventy thousand dollars in the same time.

Do you ever grumble about hard times? Then think of these figures. They will apply to thousands of men now grumbling about hard times. The writer's boyhood companions were mostly given to the use of tobacco. All their meagre earnings were devoted to its purchase. He considered the subject and resolved to devote a similar sum to the purchase of books. To-day there are nearly one thousand volumes on his library shelves as a result. The library is open to all his friends. They use it and are benefited. Had the money been invested in tobacco, or other selfish luxuries, how much benefit would have been credited to it? What bad effects on health and morals might have resulted?

Books are the noblest of companions. They will not quarrel with you or talk back. If you disagree with them you can "shut them up" without a frown or disrespectful word. Through them one may become acquainted with the wisest men of this or any past age. His intellect is strengthened, his views broadened, and he becomes a better man, more able and willing to perform his duties to society and to government. Let us have more "farmers' libraries."

JOHN L. SHAWVER.

EXTRACTS FROM CORRESPONDENCE.

FROM NEBRASKA.—This section of the country is tolerably level. The soil is a rich, sandy loam, and good for corn, oats, spring wheat, flax and stock. We have an abundance of wild hay and considerable tame hay. We like our wild hay for horses, as it is cleaner than timothy. Sugar-beet raising is proving to be a success this year, where they were put on ground that had good drainage. We had quite a large rainfall in Nebraska this year; low ground remained wet a little too long for sugar beets, as the thinning process must be done at a certain time.

Warrenville, Neb.

J. F. D.

FROM PENNSYLVANIA.—Ulysses, Potter county, is a healthy little town situated between the hills, not far from the head waters of the three rivers, the Genesee, Alleghany and Potomac, which rise within the circle of one mile. We have nice farms and gardens here. Dairying pays best. Fruit will be scarce in the orchards this year, owing to frost, but there is an abundance of wild fruit in the woods, where the timber has been cut for logs and tanbark. Cutting logs and peeling bark is carried on to quite an extent, as there is plenty of hemlock. There is much bark used here in our own county. Costello is said to carry on the largest tannery in the world. The logs that are not sawed here are floated down the rivers. Farms can be bought cheap where the timber has been cut. Old farms can be bought for from \$20 to \$50 per acre.

Ulysses, Pa.

M. A. D.

FROM WEST VIRGINIA.—Tyler county ranks as one of the best grazing counties in this state. A great many cattle, horses, sheep, etc., are raised. The average farmer finds sheep pay better than cattle. Wool has been selling at a very good price; coarse wool now brings 25 to 30 cents per pound; fine, 28 to 30 cents. Sheep are worth \$2 to \$5 per head; cattle, 2½ to 3 cents per pound; horses, \$80 to \$125 each. Corn is 90 cents to \$1 per bushel; oats, 50 to 60 cents; wheat, \$1; beans are \$2.25 per bushel. Considerable produce is sold, and is generally bought by local tradesmen. Butter is 8 cents per pound; eggs, 12 cents per dozen; lard, 10 cents per pound; hams, 12 cents; shoulders, 8 cents, and middlings 10 cents per pound. We have good schools here. There are churches of the following denominations: Methodists, Baptists, Presbyterians and Christians. The country is generally hilly, except along the Ohio river, where some fine bottom land is found. Along the large creeks there is good bottom land. Land is worth from \$7 to \$10 per acre. The Tyler county fair, which has done much to encourage the raising of thoroughbred stock in this county, will be held August 25th, 26th and 27th. The prospects for a big fair are flattering. If you are coming to West Virginia, Tyler county can be recommended as a good county for emigrants.

Middlebourne, W. Va.

C. H. R.

FROM MISSOURI.—Reynolds county was organized in 1850, and is the third largest county in the state. It has good natural advantages for those wishing to engage in agriculture and stock raising. We have no stringent stock laws here that compel the farmer to restrain his stock from running at large. The range for stock is very large and abundantly supplied with succulent grasses of various kinds, so as to prolong the grazing season from early spring to late in the autumn. Our climate is very healthful. We have no blizzards, no severe winters, no cyclonic disturbances, no excessively hot weather in summer. It is being demonstrated that southeastern Missouri is the finest fruit-producing section in the Union. All kinds of fruits do well. We raise most all kinds of cereals and grasses. We have a great variety of timber, both hard and soft. Small game is plentiful,

such as squirrels, quails and turkeys. We have beautiful, clear springs of sparkling water, the water being so clear and transparent that a person can see to a depth of from six to eight feet. Our streams are generally very well stocked with fish. We have a good system of public schools and churches of all denominations. We want a good class of industrious people to come among us and help to build up one of the best countries west of the Alleghenies.

W. H. S.

Black, Mo.

FROM NEW YORK.—Cayuga county is most favorably located in the central part of the state. It has eight railroads passing through it, and the Erie canal. Lake Ontario bounds it on the north, where the Lehigh Valley railroad has large coal-wharves, from which they ship large quantities of coal. On the west side of the county we have Cayuga lake for a distance of forty miles. This county is well adapted to a great variety of fruits and berries. Apples will make a good crop here this season; there were none here last year. Pears are looking well, and those who have peach orchards will have peaches this year. Where the grapes were not injured by frost there will be a good crop. Plum-trees are breaking down with the great weight of fruit. Cherries have been the largest crop for a number of years. Berries of all kinds are plentiful. The scarcity of rain affected fruits, grain and grass more or less. The wheat crop is better than expected. Corn and spring crops of barley, oats, grass, etc., have needed more rain. The county-seat is Auburn, a city of 26,000 inhabitants, beautifully situated near the romantic and picturesque Owasco lake, that is twelve miles in length and a mile in width. Its shores are lined with numerous cottages, villas and camps. It is rightly named "Auburn at the lake." The electric railroad has been extended to the lake and to Island Park, connecting there with fast and graceful steamers that carry excursionists to the various camps and landings.

S. S. B.

Auburn, N. Y.

FROM WYOMING.—This state is quite rich in minerals, especially coal, gold, silver and copper. Our soil is unsurpassed in fertility. Irrigation is necessary for farming. Wheat yields about 30 bushels per acre; oats, 50; barley, 60; potatoes, 200 bushels; hay, two tons. The nights are too cool for corn to ripen. Grain is worth from 1½ to 2 cents per pound; potatoes, \$1 per bushel; hay, about \$8 per ton in stack. Stock ranches are worth from \$10 to \$25 per acre. The winters are often cold and disagreeable for about six weeks, but the air is dry and the cold is not felt so keenly as in the states further east. The climate is quite healthful for persons afflicted with pulmonary diseases, indigestion, etc. If persons affected with lung trouble and most other diseases would come to the dry, bracing air of the grand old Rockies before one foot is in the grave, they would soon become strong and healthy. For advanced stages of consumption, Colorado and New Mexico are preferable, as the winters are warmer and the altitude is not so great as here. Outside range is unsurpassed. Sheep thrive well, browsing on the sage brush during snows. Sheepmen are almost coining money here. Cattle require a little feed during the worst winters, to be profitable. This state is the place for women who wish to share equal rights and equal suffrage. Giving women access to the polls has a refining and ennobling influence on the community, which all good citizens appreciate. By scratching saloon-keepers and corrupt, immoral candidates for office, she secures the nomination and election of the best men in the community for officials.

Fort Fred Steele, Wyo.

R. E. A.

FROM TEXAS.—The eastern part of Texas is a fruit section. There is every reason to believe that farming and cattle raising would pay better here than in the western part, as the destructive "northerns" never strike the timber belt. I have seen clover six inches high in March. Figs are growing without any cultivation, and the trees are loaded with large, fine fruit. Peaches grow to very large size. I see no reason why dates, prunes, lemons, oranges and other fine fruits would not equal those of California. Then, we are within a few hours' run of ocean steamer freightage that reach all the best markets in short time. Lands are worth \$2.50 to \$6 per acre, and just as good as any lands in Ohio or any other country. On a farm that cost me \$5 per acre there is as good a crop of ribbon cane growing as the best farms on the Mississippi river can produce. Then I have corn, cotton, oats, grass, peaches, figs, Irish and sweet potatoes, and every variety of garden vegetables. This is an iron ore section. Water is abundant and equal to that I used to drink at my old home in Ohio. The great curse of this country is the cotton raising, which will make any farmer poor. Money cannot be had on that account, and unless a person can come with sufficient means to keep from borrowing, I advise them to stay out of Texas. As to the idea of Texas being filled with outlaws, I sleep with my doors and windows open and attend to all business matters the same as in Ohio. If a person wanted to "kick up a row," he could be accommodated very quickly. Palestine, this county, was the only place where Sam Jones was caned over the head. The summers are not any hotter than in Ohio; then the gulf winds set in at sundown and the nights are cool. The only drawback for Ohioans to

locate in Texas is they must come in November or December to become acclimated; if in other months, they are apt to take the slow fever. The land-sharks are to be avoided, just as in any of the new western states, and to buy of a real estate agent without seeing the lands is a very poor way to become satisfied. I have no farm lands to sell, but could buy a hundred thousand acres around me at \$2.50 to \$6 per acre.

G. D.

Steelboro, Texas.

FROM KANSAS.—Phillips county is located in northern Kansas, a little west of the center of the state. It was organized eighteen years ago. Its present population is 18,000. About nine tenths of the land is gently undulating prairie. The productive capacity of the soil is hard to surpass, as the present crops will testify. With favorable seasons, all kinds of grain and vegetables grow to great perfection. All kinds of small fruits are successfully raised, and some kinds of standard fruits do well with proper care. Numerous streams of water are found throughout the county. Plenty of well water is found at a depth of fifteen to fifty feet, mostly limestone water. All the larger streams are skirted with narrow belts of inferior timber. We have no roots, stumps or stones to contend with, and the soil is exceedingly easy to cultivate. This county was settled by immigrants mostly from Iowa, Illinois and Missouri, though we have representatives from nearly every state, and a few from Europe. No country can boast of a better class of people than can be found here. The large number of churches and school-houses are proof of the above statement. This county, in common with the balance of the state, has made rapid strides to the front during the last decade. The health of this part of the state is not excelled by any part of the West. Malarial diseases are unknown. Many persons who are troubled with pulmonary diseases are greatly benefited in this climate. We are about 2,200 feet above sea level, which is sufficient to insure a healthful climate. Improved and unimproved land can be bought at very reasonable figures; unimproved, from \$3 to \$6 per acre; improved, from \$8 to \$25 per acre. The worst drawback we have is lack of capital; therefore, I would say to one and all, if you cannot command a little capital, you will do better to live in an older and better developed country convenient to a good market. But if you can command a few thousand dollars, you will find this a good place to invest it. I am well satisfied that there is no place in all the western states that holds out greater inducements to the man of limited or unlimited capital. Men and women of merit will always find a hearty welcome in this country. But we will say for your good, if you are without some means you will do better, financially, to stay in older communities. It is better to be hewers of wood and drawers of water than be a slave to the capitalist. My advice to every man who thinks of emigrating to a new country is to go first and see for yourself; and when you go, take sufficient time to investigate as you go along; stop over a few days with some old-timer and get one sniff of a Kansas cyclone or snow blizzard; it will do you good. The blizzards and cyclones that you hear so much about in this country are more in the mind than in the wind. I have seen but one snow blizzard in sixteen years, and that only lasted eight hours, and a cyclone has never been known in this county. The winters are comparatively mild, much milder than any of our sister states. The wagon roads are usually good the entire winter. The average annual rainfall is said to be about thirty-five inches.

Agra, Kan.

C. T.

THEY ALL DO IT.

J. G. G. BARNES, ALLEGHENY CO., N.Y.—Yes, we know that there are some who do not use butter color, simply because their fathers didn't, but their number is growing beautifully less every year. There is no more harm in using a good butter color than in adding salt—one pleases the eye, the other the taste. The best brand, in our opinion, is the Improved, made by Wells, Richardson & Co., Burlington, Vt. On receipt of six cents they will send you, postpaid, a sample sufficient to color about sixty pounds of butter.

The best dairymen use this color, although some of them are quiet about it, but such men as A. W. Cheever, editor of the New England Farmer, Geo. Jackson, at one time editor of the Dairy Department Jersey Bulletin, and Chas. Robinson & Son, the famous breeders, use it and gladly endorse it.

It will pay you to read our liberal August offers on page 379.

SEED WHEAT.

Catalogue of Seed Wheat, Poultry, Poultry Supplies, Dutch Bulbs, Etc., FREE on application. Samples of 4 most popular varieties, and sample of Penna. White Rye mailed for 10 cts. WM. H. GRIER, 253 N. Eighth St., Philadelphia, Pa.

SEED WHEAT

WILSON'S FALL CATALOGUE, 1891. Price-List and Description of new and productive varieties of Seed Wheat, including NEW RED WONDER, also choice Strawberry Plants, Small Fruits, Trees for Fall planting. All kinds DUTCH FLOWERING BULBS, ROSES, and other winter-blooming PLANTS. Thoroughbred Poultry, German Hares, &c. A sample of the new RED WONDER Wheat sent with each Catalogue. All FREE, on application. Address SAMUEL WILSON, Mechanicsville, Bucks Co., Pa.

SEATTLE the Metropolis of **WASHINGTON**. Send stamp for "Travels of Brother Jonathan" to Eshelman, Llewellyn & Co., Seattle, Wash.

If afflicted with sore eyes use Dr. Thompson's Eye-Water

Our Fireside.

THEIR DIFFERENT WAYS.

(TWENTY TO ONE.)

She.

LEAF 'tis too much for my feminine brain,
This problem; my liege, will you kindly explain?
Now count 'em up truthfully, Frederick John,
Pray, how many pockets, sir, have you got on?
On common occasions, consider with care,
How many pockets, think, does a man wear?
You have them in trousers, in vest and in coat—
Too much of a good thing so many I'd vote!
With pockets behind you, and pockets before,
You bristle with pockets, you've pockets galore!

He.

Yes, lavish of pockets is man, I confess;
He might live in comfort with one or two less.
But tho' an odd creature, and trying at best,
I don't tuck my handkerchief under my vest.
And since, with two coats on I've pockets a score,
It isn't my kerchief has always the floor!
And—dear, you began it, so don't try to pout—
I'll go through my twenty, turn each inside out,
Restore them to order, note contents, he done,
While you, my beloved, hunt 'round for your one.

She.

For once I confess all you say to be fair,
But I don't wear my hands in my pocket—so there!

—Josephine Manning, in the Homemaker.

DEAR HEART, BELIEVE.

Dear heart, believe I think of you
When evening's gray shuts out the blue,
In the slow hours of middle night,
And when the lances of the light
First pierce the mists of darkness through.
Naught can the days of absence do
When love is strong and hearts are true,
To blur with change affection's might,
Dear heart, believe!

If sullen Death between us drew
The veil that hides from earthly view
The much-loved face, the clearer sight
Would still discern in Death's despite;
Beyond the veil can love pursue,
Dear heart, believe!

—Oscar Fay Adams.

THE STORY OF AN OUTCAST.

ELIZA R. PARKER.

ADREARY place was Allen's Gulch. The brightest sun that ever shone never seemed to cheer it up with even a ray, and the blue sky that looked down into it was narrowed and broken by the border of great, gaunt pines that rose above the muddy stream and bare soil. The seams in the rocks appeared always dripping and slimy; and half way up, where the pines stretched out and seemed to reach nearly to the sky, great crags stood looking down in gloom upon all nature below.

It was not a pleasant place to live, but my husband's business demanded he should go there for a season, and I insisted on sharing his life there, as elsewhere. A dreary cabin was to be our home for months, and I was the only woman within a hundred miles. What was I to do for a servant, Charles asked. And never being accustomed to work, the question was a serious one.

A few nights after our arrival at the mines, the rain came down in torrents, and the wind went crashing through the sturdy trees, while the path up the mountain was first a stream and then a cataract, doing its best to make everything more cheerless and gloomy. We were talking of our far-away southern home that night, as we sat listening to the rain and wind and coaxing the fire into a blaze, when a sound was heard at the rough, oaken door. My husband rose and opened it. A gust of wind and rain swept into the room, and the storm gave a fierce howl. Then he stooped, and drew in from the step a woman, drenched and draggled with mud and rain. The creature was worn and emaciated, and her clothes were in tatters. Her face was brown and sunburnt, and now that the blood had left it, the skin looked dark and ghastly. The stranger's blue lips moved; we hent to hear, but the words were unintelligible.

"She wants more heat," said a rugged miner who had followed the woman to the door.

And so she did. Before the genial warmth the frost that seemed to have settled on her heart and chilled her blood melted away, and in an hour's time the poor wayfarer was sitting in my own arm-chair, with a life-glow on her face.

"My good woman, where did you come from?" asked my husband.

"From the far-away South, sir," and the tones were of our own people.

"We, too, come from that region," I said. As I spoke, a light came into the wan face, and with the impulsiveness of the people of the sunny land, the stranger clasped my hand.

"Oh, madam, I am so glad to be among my own people in this cold, strange country."

"Why and how did you come?" I asked.

"Oh, I will tell you. But it is a long story—another time—after awhile. I am poor, but I can work. I can do many things for you if you will let me stay."

The face so prematurely aged and the silver threads in the jet-black hair told of sorrows at which we might only guess.

"What is your name, my poor woman?"

"Florine Le Comte. The only one—the only one of my poor family who bears it. The rest, all—all are gone," and tears trickled down the pallid cheeks.

I was irresistibly drawn towards this homeless woman, alone among strangers and weighed down by some great sorrow, and now that I needed help in this forsaken region, I concluded to take her into my employment. So next morning, when my husband went forth from the cabin, he left two women, instead of the one he usually took leave of so reluctantly. Florine was installed at once in my household, and soon became invaluable. Such beautifully washed clothes were never before seen in miner's camp; such dutifully cooked meals and such willing service was never enjoyed outside of civilization. She was intelligent and industrious, but from the night of her arrival had never spoken of her former life, and I disliked to seek the confidence not given me. From the first I had noticed the woman's fondness for children. The dirty little creatures of the miners' huts were always welcomed by her, and once I found her weeping over a little, black-eyed fellow, who was unconcernedly playing in a mountain stream.

One night my husband had been called to another mine. As we sat alone before the fire, I chanced to look up from my sewing, and discovered Florine gazing into the bright embers, with tears glistening in her great, black eyes, which had grown soft and beautiful, as well as her skin had become smooth and plump in the months she had been with us.

"What troubles you, my poor girl?" I asked. She started, and seemingly recovered herself, wiped her eyes and said, "Only an old memory, only a thought of the long ago."

"Come," I said. "Come, Florine. You are wearing away under some great sorrow. Will you tell me your story, as you promised the night you came to our hut? If it be one of sin, as well as sorrow, I will sympathize with your grief, whatever it may be."

For a moment the sad, dark eyes looked into my face with a strange, searching look. Then she began in quivering tones:

"Madam, I believe you. But oh, it is so hard to talk of the sad, sad life gone by. I will tell it as it all happened. I was born on a plantation in Georgia, near a little southern village; it was a quaint, simple place. My mother died at my birth; my father, when I was twelve years old, and I went to live with my uncle. He was a wealthy man, and my residence in his home improved my mind and manners. Here I met the son of a wealthy planter, who loved me. Oh, he was so beautiful and good—so far above me," and the poor creature sobbed as if her heart would break. When she recovered, she continued:

"I need not tell you how his family protested, and how we were married and fled from his father's anger. Oh, dear madam, you cannot conceive the trials and troubles we met with. My Howard, raised in luxurious idleness, was unable to hear privation. We dragged from place to place. After a year, we had a little child, a lovely little girl, and then our life became so hard, that, drawn with many others by the stories of the treasure in the western mines, we started thither. For days we traveled. One night, with a fearful crash, our train was borne down an embankment. I was taken insensible to a neighboring town. When I recovered, my baby lay a corpse in the house, and my husband was unconscious. I made my way to his side, but there was nothing but a vacant look in his eyes, and so he remained, till pitying death relieved him of his sufferings.

"After I had laid my poor Howard beside my little Lily, among strangers, the world seemed all cold and dark. What I did since that day I hardly know. When my little money melted away, I wandered from place to place, and so came here in quest of work. People would not hire me in other places. Some said that I was a wicked, wild creature; others that I was crazy. I heard by chance that labor was scarce at the mines, and came to find a home with you, madam, where I might be content but for memories of the past."

And so the lonely woman staid with us, becoming more and more necessary to our comfort as time passed.

One bright October day, just at sundown, we were sitting in our cabin door, Charles and I, speaking of intended departure for our old home in the South, when we saw a crowd of men gathered on the borders of the settlement.

"Suthin' the matter," said Jake, the plowboy, coming up toward us, and we soon heard some unintelligible words about a "lost baby." Soon the crowd drew nearer. They were all miners and were expostulating with a gaunt, tearful woman, who was making fearful efforts to break away from them. She was the widow of a miner who had been killed in an accident in the mines several weeks before.

"My child! my child!" she screamed. "My poor little Ned! Will no one save him? Will no one bring him to me? Oh, let me go. Please do. I will save him," and she wrung her hands and struggled to free herself.

"What's up?" inquired our Jake.

"Little Ned, Widow Jones' boy, is gone below. A hit of the shaft caved in and smashed the little fellow, what was in the way. No good tryin' to git him till mornin'. Can't he die, noways."

In our sympathy we followed the mournful procession to the little hut, and when the unhappy mother had been borne in, we sadly turned away. It was a starry night. There was no moon, and the intense blackness on which the little points of light glittered and twinkled gave a solemn aspect to the

heavens. When we reached our cabin, the door was open as we had left it, and the fire had gone out upon the hearth.

"Where is Florine?" we both asked together, for she was never absent.

"Gone down to see to the poor woman," I explained to Charles, but somehow I felt I was not right, and my husband ran down to the widow's hut only to return with the news that she was not there.

"Where can she be?" I asked myself, reluctantly, and just then the memory of the sad scene I had witnessed passed before me—the frantic mother, the lost child, the heart-rending appeal and the remembrance of poor Florine's own mournful story. My husband read my thoughts in my anxious face, and turning to Jake, our trusty help, said:

"Follow me."

On they went, wading through the wet grass near the little stream. Jake reached the shaft first. He was standing over a wide rent in the side of the earth. The timbers had given way, and a broken mass of rocks and clay covered the opening as far as could be seen.

"Just as I thought," exclaimed the boy, and other men gathered around him as he seized a rope and lowered himself down by the light of a torch. In a few minutes he called:

"Haul up, fellers. Keep a steady hand."

And so they did. A mass of clotting swayed at the end of the rope. It was the form of a woman, bruised and torn, covered with dust and mud, but tight to her bosom was clutched with rigid grasp the widow's child. In her efforts to recover the boy the earth had fallen upon her—the poor southern girl—and buried both in a living grave.

"Let's take her to the house. The missus may bring her back," said Jake; and they bore the sad burden to the little hut.

As I spoke, the eyelids unclosed, and Florine's black, sorrowful eyes looked into my anxious face. They wandered around, then became fixed upon the starlit sky above.

"My Howard," the weak voice murmured. "My brave Howard, I see you. I have my little Lily in my arms. How happy I am, after the long, cold night of sorrow. How bright the stars shine on us. Let us go to the old moss spring, and rest beneath the oaks until morning. Then we will go home—home, Howard, to our sweet southern home. Howard—Lily—" The purple lips remained apart. The beautiful, patient soul had passed away with the thought of those the sorrow-stricken woman had loved so dearly.

We stood in silence. The stars above shone sadly down upon the white, dead face, and gleamed with sparkling beauty, lighting up the sky as if to welcome a soul passed into light. The wind moaned low, and its tones seemed sweeter in that hour that brought the angel Death to mine, and tears were on the hardened cheeks that had for years not been thus wet.

"Poor critter," said Jake, turning away, "she done better nor staying here. She's been a cryin' and a mournin' for her people ever since the night she come. Mehby she's with some of 'em what's gone before, now."

We felt he had, in his humble way, spoken the truth. The poor, broken life was best brought to a close. It had been given freely, to stop the pain of a sorrowing mother's heart, and surely the reward was in the end great.

GRAPE JUICE AS A BEVERAGE.

The strong objection to the use of fermented grape juice, even when the proportion of alcohol is very small, render the "fruit of the vine" a forbidden article, even for invalids, in many households. But pure grape juice, in an unfermented state, is both wholesome and refreshing, and those whose temperance principles will not suffer them to indulge in even the lightest wine may still enjoy the luxury of drinking grape juice without a twinge of conscience.

In that excellent book, "Diet for the Sick," by Mrs. Mary F. Henderson, a method of preserving grape juice is given, for which she acknowledges her indebtedness to Dr. Dodds, of St. Louis. This being the time for preparing this beverage, we give her directions for making it. As will be seen, they are essentially the same as for cooking ordinary fruits, but we quote the whole for the benefit of those who may not have had experience in canning:

"Take grapes thoroughly ripe, and fresh from the vine. The Concord and Isabella are especially good, but any fresh, ripe and juicy grape may be used. Allow one quart of water to three quarts of grapes, freed from the stems. Use no sugar. Let it come slowly to a boil, and when the whole mass is boiling hot, strain the juice through a cheese-cloth, flour-sack or other strong cloth. Then return the liquor to the fire, and as soon as it is at the boiling point again, can it.

"The less the fruit or juice is cooked, the brighter will be its color and the better the natural flavor of the grape will be retained. This, like all other articles to be canned, must be at the boiling point when it is sealed. If the juice is to be used at once, it should not be brought to the boiling point a second time.

"Use wooden spoons in its preparation, and only glass jars for keeping it. The action of any acid substance on tin is to corrode it and poison the fruit.

"Before heating the grapes, see that all the necessary preparations are complete; namely, that the jars and covers are clean, the covers fitted, etc."

Mrs. Henderson adds some elaborate direc-

tions respecting the manipulation of the jars to avoid breaking them, but these we omit, as it is simply necessary to set them on a cloth dipped in water, partly wrung out, and folded two or three times, when the boiling liquid may be poured in with perfect safety. Adjust the rubber ring, and screw on the top tightly. After the jars are cool enough to handle, screw down the tops again, and when entirely cold, give them another twist, to make sure that the sealing is perfect. Finally, wipe them clean with a damp cloth, and set them away in a dark, cool closet or cellar, or wrap the jars in heavy, brown paper, to exclude the light. The cooler this preparation is kept without freezing the better.

HOW TIN PLATES ARE MADE.

Following is a summary of the Morewood process of tinning plates now in use at the works of the United States Iron and Tin Plate Company, Limited, at Demmler Station, Pennsylvania:

The plates are rolled in the ordinary manner into black sheets, eight of these sheets being rolled at one time, and, after being sheared to size, are placed in the "black pickle" bath of sulphuric acid, where all oxidation is removed. They are placed in an annealing furnace for thirty-six hours, and are next passed through the cold rolls, receiving a smoothly polished surface, after which they are annealed again and put into the "white pickle," where they are thoroughly cleansed from any oxidation and are ready for the tinning process.

The mode of putting on the coating of tin is a very simple one, and is begun by submerging the plates in a bath of palm oil until all the water disappears, the oil forming a flux for the tin, the first coat of which is received in the tin pot, the plates next being dipped into the "wash-pot," and when taken out, the tin is spread over the surface with a brush by hand. The final act in the tin-coating process is in passing the plates through rolls running in palm oil, whereby the tin is evenly distributed and a smooth surface is obtained.

There are five of these rolls used, three running on top of two, and the plates make two passes through them, first being let down through the first and second of the upper set, and by a cradle arrangement are returned through the second and third. This completes the tinning operation proper, and the polish is obtained by rapid movements of the plates through bran and middlings, respectively, and then polishing with sheepskin. The result obtained at the Demmler works is a very excellent article of bright tin plate.—*Iron Industry Gazette.*

SUNSHINE.

Light is necessary to health. People who live in gloomy places, say state prisons for example, are always peevish. Owls affect the twilight and the dark, and what miserable mopes they are. Eagles love the sunshine, and how strong of wing they are and how exultingly they soar. It is true that one may have too much sun, as, for example, in the shape of a *coup de soleil*; but it is cheering to see the sunlight, even when it is necessary to sit in the shade. How it enlivens us in winter, exhilarates us in spring, enhances our appreciation of the shade in summer, and charms us in glorious autumn. In September, when Old Sol seems to have stolen a few pale rays from the moon, wherewith to temper his fiery glories, and all through glorious October—nay, even in November, and sometimes up to mid-December and often in windy March—how delightful is the sunshine of our happy latitude.

A blessing on the sun! "Of this great world both eye and soul;" source of life and health and beauty; type of the light that shall be; symbol of the smile of God!

ONIONS FOR DIPHTHERIA.

"Why don't they use onions? For goodness sake, why don't they use onions? Where do they live? I will go up there to-day and tell them to use onions!"

Such were the exclamations of our mother when we reported yesterday at dinner that a child of Mr. G. W. Dudley was dead, and the whole family, including himself, alarmingly sick with diphtheria. Mother was moved to these earnest and interested expressions by a firm belief that she knows several lives saved by the use of onions in diphtheria. In these cases raw onions were placed in a bandage and beaten into a pulp, the cloths containing onions, juice and all, being then bound about the throat and well up over the ears. Renewals may be made as often as the mass becomes dry. In the cases noticed the result was almost magical, deadly pain yielding in a short time to sleepy comfort. We wish this remedy might have a wide enough trial to fully test its usefulness.—*Danvers Mirror.*

For Rheumatism

sciatica,
rheumatic gout,
neuralgia, dropsy, and
white swelling,

use

Ayer's Sarsaparilla
Cures others, will cure you

THE FALLS OF NIAGARA TO BE UTILIZED FOR POWER.

These famous falls, it is estimated, would, if fully utilized, afford all the way from ten to fifteen million horse-power; probably enough to run all the machinery in the New England states. The magnitude of the undertaking, as well as the fact that no water-wheel has ever been found adapted to such conditions, has heretofore discouraged any attempts to make use of this stupendous power. Turbine wheels, it is well known, cannot be operated under any such head as these falls afford, their usefulness being limited to heads ranging from ten to thirty and forty feet, and as there are many other streams from which this much fall can be obtained that do not present such difficulties of application, the great wealth of energy Niagara affords has been allowed to run to waste.

A commission from the Canadian authorities, consisting of a member of parliament and several noted engineers, recently visited the Pacific coast to investigate the merits of the Pelton water-wheel, with reference to its adoption in various enterprises projected in the provinces, but more particularly for the purpose of utilizing the water-power of Niagara Falls from the Canadian side. The result of the investigation was satisfactory in the highest degree, and will undoubtedly result in the first attempt to make this gigantic force available for manufacturing and commercial purposes.

The height of Niagara Falls is one hundred and seventy-six feet. By carrying water in steel conduits a distance of about three quarters of a mile, to a point below the rapids, a fall of two hundred and forty feet can be obtained. This entire fall it is proposed to utilize, placing the wheels above high-water mark, along the bank of the river, and locating various manufactories on accessible sites above, the power from the wheels to be carried up by a system of cable transmission. Anywhere from 100,000 to 500,000 horse-power can, it is estimated, be obtained in this way without any appreciable loss in the current which sweeps along with such irresistible force. In addition to local manufactories, dynamos will be run to supply power and light to the adjacent towns and cities, as also to transmit electrical energy for power and light to the cities of Buffalo and Toronto, which are only about twenty miles distant. The project, though one of great magnitude, is now believed, with the means at hand, to be perfectly practicable, and the utilization of these great falls, about which there has been more discussion than any other problem of modern times, seems about to be realized.—*Electrical Review.*

IS BEAUTY A BLESSING?

Of the beautiful women that I have known, but few have attained superiority of any kind. In marriage they have frequently made failures; why, I do not know, unless the possession of great loveliness is incompatible with the possession of an equal amount of good judgment. So much is expected by the woman accustomed to admiration that she plays and patters with her fate till the crooked stick is all that is left her. This we see exemplified again and again. While the earnest, lofty, sweet-smiling woman of the pale hair and doubtful line of nose has, perhaps, one true lover, whose worth she has time to recognize, an acknowledged beauty will find herself surrounded by a crowd of showy egotists, whose admiration so dazes and bewilders her that she is sometimes tempted to bestow herself upon the most importunate one, in order to end the unseemly struggle.

Then the incentive to education and to the cultivation of one's especial powers is lacking.

Forgetting that the triumphs which have made a holiday of youth must lessen with the years, many a fair one neglects that training of the mind which gives to her who is poor in all else an endless storehouse of wealth from which she can hope to produce treasures for her own delectation and that of those about her, long after the fitful bloom on her handsome sister's cheek has faded with the roses of departed summer.—Anna Katherine Green.

NATURE'S GERMICIDE SOLUTION.

There is no doubt that daily, every man, woman and child take into their systems a certain number of disease-causing germs, such as tubercle bacilli in milk, or typhoid germs in water, and yet it is only a comparatively small number who fall a victim to disease. Why is it, then, that they all do not die? The explanation of this rests in the fact that the liquid portion of the blood is one of the very best of germicides when the body is in health, and will cause the instant death of a large number of bacilli. The white cells in the blood also have the power to capture and eat up a certain number of germs, and it is only when too large a number gain entrance, or when a person is in weakened health, that there is any danger of infection. So take care of your health and laugh at the germs.

OUR GRAIN-GROWING CAPACITY.

The Department of Agriculture has sent out a pamphlet giving some information on the crop situation, apropos of the discussion of that subject by Canadians and others. The pamphlet says:

There is no foundation for the theory advanced by citizens of an adjoining country that we are near a pressure of population upon subsistence. Europe has four times as many people as the United States, and very few of the countries of the Eastern continent fail to produce nearly or quite enough for their own subsistence. All eastern Europe has an agricultural surplus, and Italy's exports equal her imports. Even the Netherlands, with only 2½ acres per capita, only requires a few million dollars' worth of imports. France needs 7 per cent for a population nine times as dense as ours. Great Britain feeds half her people, and her game preserves and pleasure grounds would feed the other half if utilized. It is absurd to claim that we require four times as much area to feed a person as Europe does, and half of that country could double its production under higher cultivation.

Wheat growing is not declining in Europe. In 1886 the crop of Europe was 1,092,773,206; in 1887, 1,351,549,399; in 1888, 1,256,781,383; in 1889, 1,100,428,000; in 1890, 1,293,834,519. In this some 320,000 square miles are not included, producing some 25,000,000 bushels.

Russian production is not declining, the average for 7 years being 226,952,567 bushels; the greatest, in 1888, 295,711,493; the smallest, in 1885, 178,084,100. The winter wheat is less than one third of the production, or about the same proportion as spring wheat in the United States.

Russian exports are phenomenal, but its people are not wheat eaters. The average exports per year show for five years ending in 1881, 65,780,327; 1886, 73,721,742, and four years to 1890, 90,693,485.

The Indian scare is over. New railroads caused an increased production and large exports, but since 1885 acreage has decreased. The fear that India would monopolize European trade is gone. The largest export was in 1886-87, 41,558,765 bushels, and in 1889-90 only 25,764,123. Very little wheat will go out of India from the harvest just completed. The wheat production of the world is not falling off, but is about 2,250,000,000 bushels. It was divided up in 1890 as follows:

United States.....	399,262,000
North America.....	438,493,412
South America.....	60,271,043
Australia.....	51,440,667
Hungary.....	165,345,000
France.....	338,902,124
Germany.....	94,899,840
Great Britain and Ireland.....	78,306,116
Italy.....	126,640,746
Roumania.....	63,954,240
Russia in Europe.....	197,739,200
Poland.....	22,343,125
Spain.....	70,143,360
India.....	235,345,600
All Asia.....	307,552,000
Africa.....	38,915,322
Australasia.....	42,480,131

We have not approached the limit of our agricultural production. We could do much in the way of increasing the production of sugar cane, beets and sorghum, fibres and fruits. We will continue to raise a wheat surplus until the plains are used for more profitable crops, or the population consumes it all.

HOW THEY DRIVE IN LONDON.

England is the only place I know of where they drive to the left. English drivers say that by sitting on the right and driving to the left they can better watch the hubs of approaching vehicles, and thus prevent collisions. I don't exactly understand this, but it is the explanation they give for driving to the left.

Quick-going vehicles will turn a corner sharply, but the driver raises his whip to notify the vehicle in his immediate rear that he is about to turn. "Cabbies" are more considerate concerning fellow-drivers than they are thoughtful about the lives and limbs of pedestrians. All their attention is given to the roadway. Pedestrians must look out for themselves or be run over. That is why so many of the London police are engaged solely in attending to street traffic. Yet, with all their vigilance, more accidents occur in London, proportionately, than elsewhere. London drivers are polite and very civil to each other. If an obstruction appears in front of a horse, or if for any reason he is obliged suddenly to slow up, the driver will immediately notify the driver in the rear by holding out horizontally his left arm; and this sign is passed down from one driver to another until the very end of the line of blocked vehicles is reached.—*N. Y. Home Journal.*

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LABEL THE LITTLE ONES.

The anxiety so often caused by the wandering away of a little child from his usual surroundings, or his being separated from his parents in a crowd, is made unnecessarily distressing by the fact that he usually carries with him no certain means of identification. To label him with his full name and address would be so simple a precaution that it is surprising that it is not a universal practice. We brand our cattle, punch caustic characters in the web feet of our fowls, engrave dog-collars, and scrupulously tag umbrellas and bunches of keys, while giving hardly a passing thought to what would happen to our little, speechless toddlers and ourselves should they stray into unknown streets or meet with some accident in the domains of strangers. In the customary marking of undergarments with indelible ink, it would be but little more trouble to use the full name instead of initials, and on outer garments a convenient place could be selected—say the inside of the collar-band or of the end of the sleeve—where the full address could be placed. If every reader would adopt such a plan, and recommend it to others, there would be at once a beginning, which might go far toward establishing a uniform custom, the usefulness of which would seem to be beyond question.

THANK THE CHILDREN.

They run on our errands, up-stairs for our books or slippers, our thimbles, our new magazines; down-stairs to tell the servants this thing or that; over the way to carry our messages; to the post-office with our letters and parcels.

They leave their play or their work a dozen times in a morning to do something to oblige us, who are grown up, bigger, stronger, and apt to be less absorbingly occupied than they.

No game of politics or business in later life will ever be so important to the man as half

and top to the little lad; and no future enjoyment of the little girl will ever be greater in degree and in kind than her present interest in her dolls and her playhouse; yet Johnnie and Jennie fly at our bidding, arresting themselves in mid-career of the play which is their present work, and alas, half the time we quite overlook our own obligation to be grateful.

We do not say, "I thank you." And because we do not say it, we make it difficult for our children to be as polite, as simply courteous, as otherwise they would be by nature and the imitation which is second nature to all children.

BEATING THE EGG TARIFF.

The Tombstone Prospector says: Since the duty on eggs has been the rule, many devices have been thought of for manufacturing them. The idea of a Nogales man is, however, the only feasible scheme up to date. His proposition is to feed hens on the cheap grain of Mexico and have them lay in the United States. For this purpose a long building will be placed on the line, half in Mexico and half in the United States. They will feed and water in the Mexican end, and when they want to lay, they go to the further end of the building, and in that way escape paying the duty. The projector of this enterprise came from Maine.

PARSONS PILLS.

"Best Liver Pill Made."

Full particulars free. DR. L. S. JOHNSON & CO., BOSTON.

It will pay you to read our liberal August offers on page 379.

Premium No. 724.

ICE-CREAM In One Half minute.

The JACK FROST FREEZER is made on a new and scientific principle, that freezes the cream instantly.

Instead of having the ice and salt outside of the can containing the cream, in this new and improved freezer the cream is on the outside, and the ice and salt are inside of the cylinder. It saves its cost very quickly in ice, salt, time and labor. A few cents' worth of ice and salt will make enough ice-cream for twenty-five persons, and a child can easily operate it. It is simplicity itself, as there is no gearing to get out of order in using, no oily cog-wheels or iron work. It makes smooth and delicious creams and ices, and is free from danger of metallic poisoning. The cream may be frozen in the warm kitchen as quickly as in the cool cellar. It is impossible for the salt water or ice to leak or come in contact with the cream.

IT IS THE MOST PERFECT ICE-CREAM FREEZER MADE.

With the size we offer you can make from one pint to two quarts of ice-cream at one filling. Larger sizes are made, but this is large enough for most families, as the pan may be refilled several times and a large quantity of cream frozen in a short while.

Given as a premium for 12 yearly subscribers to this paper, in which case the 12 subscribers are not entitled to any of the special presents offered.

Price, including one year's subscription to this paper, \$3.50.

The freezer must be sent by express, charges to be paid by the receiver. Name your express station if different from your post-office. Address all orders to

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

A Handsome and Well Made Hammock, \$1.50

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The Bay State Hammock is the best we have ever offered. The body being closely woven instead of knit, like the ordinary hammock, it cannot pull the buttons from the clothing. It has the patent iron end, which makes the ends lie flat and smooth instead of being rolled up, as is the case with the round ring. It is 11 feet long, 3 feet wide, and will easily sustain a weight of 300 to 400 pounds.

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FOSTER

Our Household.

A COUNTRY SUMMER PASTORAL.

[As written by a learned scholar of the city, from knowledge derived from etymological deductions rather than from actual experience.]

I would flee from the city's rule and law,
From its fashion and form cut loose,
And go where the strawberry grows on its straw,

And the gooseberry grows on its goose;
Where the catnip tree is climbed by the cat
As she croches for her prey—
The guileless and unsuspecting rat
On the rattan bush at play.

I will watch at ease the saffron cow
And the cowlet in their glee,
As they leap in joy from bough to bough
On the top of the cowslip tree;
Where the musical partridge drums on his drum,

And the woodchuck chucks his wood,
And the dog devours the dogwood plum
In the primitive solitude.

Oh, let me drink from the moss-grown pump
That was hewn from the pumpkin tree,
Eat mush and milk from a rural stump,
From form and fashion free;
New-gathered mush from the mushroom vine,
And milk from the milk-weed sweet,
With luscious pineapple from the pine—
Such food as the gods might eat!

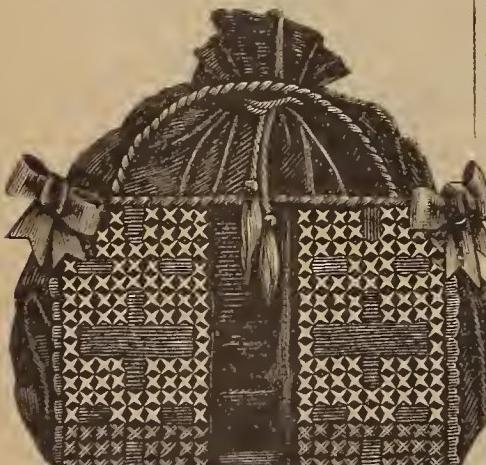
And then to the whitewashed dairy I'll turn,
Where the dairymaid hastening hies,
Her ruddy and golden-haired butter to churn
From the milk of her butterflies;
And I'll rise at morn with the early bird,
To the fragrant farm-yard pass,
When the farmer turns his beautiful herd
Of grasshoppers out to grass.

—S. W. Foss, in *Tid-Bits*.

HOME TOPICS.

EARLY BREAKFAST.—During the hottest weather of summer, all the work of the day that is possible should be done in the early morning, and an hour of rest taken in the hot part of the day. Do not, however, rise very early and work an hour or two before eating anything. As soon as you rise, heat a cup of milk and drink it, or a cup of coffee, if that agrees with you better, and eat a slice of bread or a cracker. If you do this, you will escape the faint, tired feeling you would otherwise have by breakfast time and be able to better enjoy that meal. From the last meal in the day until the next morning, an interval of ten or twelve hours has elapsed and the body is not in a condition to work two or three hours before taking any nourishment. This rule should be especially followed in a malarial district. Dr. Hall says: "If early breakfast were taken in regions where chills and fever are prevalent, and if a fire were kindled in the living-room of the house for an hour about sunrise and sunset during the early fall days, these troublesome maladies would diminish a thousand fold."

FOR BABY'S CRIB.—Soft, fleecy blankets are the best covers for baby's crib, but a very pretty comforter may be made of cheese-cloth. Take three yards of fine, cream-colored cheese-cloth. When folded together, this will make a comforter a yard and a half long and a yard wide. Fill this with a pound of the best cotton-battening. Do not tie it with knots of worsted, as is the general custom, for



WORK-BAG.

baby will pick at these bright spots, pull out the bits of worsted and put them in his mouth. Dangerous throat diseases have been traced to this habit. Instead of worsted thread, use a darning-needle with pale pink or blue "baby ribbon;" take a stitch through the comforter and tie it in little bows, tying it first in a hard knot and then in a bow, so the little fingers cannot pull it out. An edge, crocheted from split zephyr, makes a pretty finish for this little comforter.

HAPPY CHILDREN.—The first thing necessary to make happy children is happy mothers, for the foundation for a happy or unhappy disposition is laid before the baby is born. Mothers, think of this, and if you would have sweet-tempered, happy-hearted children try to keep yourselves in this frame of mind as much as possible. A child, coming into the world by no volition of its own, surely has a right to the best we can give it of inherited attributes, and of care, protection and training afterwards. Plauts cannot live and thrive without plenty of sunshine, and so children need the sunshine of love and cheerfulness in the home. It is not enough that they be fed, clothed and made comfortable physically. They do not understand the love and solicitude that prompts this care, and need the words of love and caresses of affection to fill their little lives with sunshine. If the work of the household must be done by your hands, and you must choose between neglecting work or children, do not rob the children of the "mothering" they need. If your purse will permit you any number of servants, remember you cannot shirk your responsibility. The parent is the child's best guardian. Never let the demands of society, business, the church, or your own love of ease, rob the children. The world needs workers for humanity, but let home and children have the freshness and closest brooding of the heart.

I attended the funeral of a mother a few days ago who had done good work in the church and in the temperance cause, but her best had been for her own. Five boys had been given her, all of whom are Christian young men. Besides these, her mother heart had found room for a little orphaned girl, and she, too, had been led to give her heart to the Savior. I remembered that she told me a few years ago: "When the children were little I did not try to do much outside of home. Some found fault with me because I did not go to church on Sunday evenings, but I felt that my place was with my children. I could not deprive them of their Sunday night talks with mamma. Now I can do more outside work, but I shall always keep the best of myself for home." Surely the results seem to prove the wisdom of her course, and who shall say that the memory of those Sunday night talks will not prove a safe-guard for those children through all their lives.

MAIDA MCL.

WORK BASKETS AND BAGS.

There is a certain charm about a work-basket; some of them seem almost human, associated as they are with every member of the household. And yet, I recently visited a lady who possessed no sign of this necessary article. She is the mother of two children. Not even a machine drawer appropriated for spools, needles or sewing did she have. The spool of cotton was lying around somewhere, the thimble was on her bureau, the scissors on the machine or mantel. Such a state of things seem so irregular. There are lovely work-baskets now-a-days, nicely arranged with pockets for buttons, needles and the various other things so necessary in a home. They can be ornamental even, prettily lined with some soft material and fluted ribbon fastened around the inside edge. The

larger it is the more useful it will be. A work-basket is always bewitching to the little tots, and sometimes, in a desperate case, I have given the little, busy fingers full play among its contents. But this only occurs on extra occasions—say in sickness, when pain makes the child cross; then I have found that my forbidden basket was better than a doctor's opiate.

I look upon this simple article of furniture as a treasure; hidden in its depths lies a panacea, often for low spirits—in fact, it has once in awhile proved a tonic, as I took a little garment to repair and let my thoughts wing backward as my needle pushed forward. With what rosy hopes for the future did I purchase and plan that little delicate slip, and then there is always a stray bootie in mamma's basket to mate the one on the floor by the cradle. I often take up a bit of lace—how well I remember the happy evening when it rose and fell to my buoyant step in the pleasant dance.

Every work-basket should possess a

mother's housewife. This is a dainty pocketed thing made out of memento pieces, and will contain many a little scrap of beauty for baby's doll, or a ribbon for pussy's furry neck. I love to see these baskets piled with sewing; it is a mark of plenty, and the mending be-speaks frugality.

A well-filled work-basket possesses the charm of a song to while away melancholy. I know all do not think so because they look upon it as work.

Do not forget, dear mother, that even work can be made a blessing. I believe if there were more loaded work-baskets there would be less divorces. It is a good plan to never put away fresh-laundered clothes until they are mended; let them lie—some stormy day or evening they will chase the blue phantoms from your home. I always have a small basket in-



TRAVELING WORK-BAG.—OPEN.

side the large one for spools of cotton. While reading—and I generally read while nursing baby, I come across a bit of poetry, or a little gem worthy of preservation, it is slipped into my work-basket for the present; and so with small change. A young mother, lately deceased, had one of these interesting work-baskets. After her death, the friends found a large sum of money stowed away in it. Very probable that she had dropped it from time to time, as above hinted.

Whatever you have, or do not have, see to it that some sort of receptacle is provided for the tools that are so requisite to complete the home circle.

A favorite book often lies there, or mother's last sweet letter, or the telegram hubby sent to learn how the sick baby that he left feeling so badly in the morning was at the noon-day hour.

They do not take up much room. On, or beside the machine, is a convenient place for them.

"A place for everything and everything in its place," applies very aptly to the article under consideration. I do hope they will not go out of fashion, because they are indispensable to a well-ordered home. The button-bag is a feature among the contents.

Whoever finds a home without a button-bag and a work-basket, finds disorder and unhappiness.

MRS. A. E. THOMAS.

Centre Moriches, N. Y.

SOME ECONOMICAL DISHES FOR THE FARMER'S HOUSEHOLD.

In the country, housekeepers are frequently remote from market, and find great difficulty in knowing what to have for the family table at this season of the year. For such we give the following suggestions and recipes:

FARMER'S SOUP.—Melt an ounce of fresh butter in a sauce-pan; when hot, add half an onion, chopped fine, and a teaspoonful of caraway seeds. Let brown, add two quarts of boiling water and let simmer three quarters of an hour. Prepare some dumplings, boil in the soup and serve with them.

ONION SOUP.—Peel and cut in small pieces three onions; fry them in butter until tender, but do not brown; pour over a pint of water, add a little salt and cayenne. Simmer for fifteen minutes and press through a sieve. Put in a sauce-pan and add three tablespoonfuls of grated bread crumbs and a cupful of heated

cream. Season and serve with slices of brown toast.

PRESSED CORN BEEF.—Take six pounds of the brisket of corn beef, remove the bones and tie up in a cloth. Put in a kettle, cover with cold water and set on the fire to simmer for five hours. When done, take up, put between two large plates, lay on a heavy weight and let stand over night. When ready to use, remove the cloth, slice very thin, lay on a dish and serve with grated horse-radish.

DRIED BEEF.—Take scraps or hard ends of dried beef and grate; to every cupful allow four tablespoonfuls of cream, four eggs well beaten, and a little pepper. Put the meat and cream in a sauce-pan, let heat, add the eggs; stir until the mixture is thick, spread on squares of buttered toast and serve.

BEET SALAD.—Bake three medium-sized beets and boil them with roots of celery. Cut in slices, put in a salad-bowl in alternate layers, pour a plain salad dressing over, and garnish with hard-boiled eggs.

CABBAGE SALAD.—Shred half a head of cabbage, cover with water, add a teaspoonful of salt; let stand half an hour, drain and squeeze out the water. Pour over a plain dressing and garnish with hard-boiled eggs.

EGG SALAD.—Take six eggs, boil hard, and when done, pour cold water over them; remove the shells carefully, take out the yolks from the whites, work the yolks in a smooth paste, season with salt, pepper, a little minced onion, salad oil and vinegar; mix well with the yolks and fill the whites with it; put them in the center of a flat dish. Put the crisp, white leaves of two heads of endive in a salad-bowl, pour over a plain salad dressing and toss lightly. Arrange the endive around the eggs, and pour salad dressing over all.

CHEESE SANDWICH.—Mix two ounces of cheese with a teaspoonful of butter, melt over the fire, spread on thin slices of bread, press together and serve.

SARDINE FINGERS.—Wipe the oil from three sardines, split them in two and remove the bones; dip each in remoulade sauce, place a slice on buttered bread, lay over a top slice and cut into thin fingers. Pile on a napkin and serve.

CHEESE TOAST.—Put half an ounce of butter in a frying-pan; when hot, add four ounces of mild cheese. Beat until melted. Stir half a pint of cream and two eggs together, add to the cheese, season with salt, pour over slices of brown toast and serve.

DEVILED HAM.—Put a teaspoonful of French mustard in a dish with a teaspoonful of lemon juice, add a little cayenne, mix and spread over cold, boiled ham, broil a moment over hot coals and serve.

WARMED-OVER HAM.—Put half a teaspoonful of butter in a chopping-dish, let melt, add two tablespoonfuls of currant or grape jelly with a dash of cayenne, let simmer and add a teaspoonful of lemon juice; lay in slices of ham, let simmer and serve on toast.

MACARONI.—Put two slices of bacon in a round tin pan, cover with a layer of macaroni and a sprinkle of crumbed cheese; season with salt and pepper, put in more macaroni and cheese until the pan is full, pour in ham gravy, cover with a thin pie-crust and bake.

ELIZA R. PARKER.

WHAT THEY EAT FOR ICE-CREAM IN ALASKA.

The natives were having their annual dance, before which a great feast was partaken of. It consisted of tea and pilot-



TRAVELING WORK-BAG.—CLOSED.

bread, the salt fish, smelts, dry deer meat, ribs, baluka, seal oil and two large kettles of Graham flour mush. But the chief delicacy consisted of several bushels of ice-cream, which is made of deer tallow and seal oil cooked, then cooled and stiffened with snow and ice and mixed with cranberries, which give it a reddish color. It has a kind of sour, bitterish taste.—From a Missionary Letter from Nushagak, Alaska.

THAT PARENT OF EVIL, habitual constipation—the surest remedy is DR. D. JAYNE'S SMALL SUGAR COATED SANATIVE PILLS. Non-nauseating and painless.

ANSWER TO WE'D BETTER BIDE A WEE.

WE SHALL NOT BIDE A WEE.

I ken the puir auld folk at hame
Are frail and failing sair,
And weel I ken they'd miss ye lass,
Gin ye cam hame na mair,
Richt weel I ken the grist is oot,
The kine are only thre,
Sa bring the auld folk wth ye lass,
I'll work for them and thee.

When first we told our love, my lass,
Their blessings fell sa free,
That noo while I hae life and limb,
I'll work for them and thee.
And lass the work is over hard
With mither like to dee,
Sa gin the auld folk stay wi' us
I'll work for them and thee.

I fear me sair my lassie noo,
If thou wilt work alone,
To help the auld folk doon the road,
Till seest the last milestone,
That when this world o' cark and care
The auld folk leave for aye,
That thou wilt then tho' young in years,
Be ower auld and gray.
Sa lassie dinna pit me aff
And say it canna he,
We'll gie the auld folk hame with us,
I'll work for them and thee.

Corning, Iowa. F. W. HOMAN.

CROCHETED QUILT SQUARES.

BY EVA M. NILES.

This quilt, when completed, is very elegant. Spread it over a quilt of colored sateen or cambric when on the bed. About two boxes of Morse & Kelly's knitting cotton, No. 8, will be required. Use a No. 17 steel hook to work with. Commence with the rose in the middle.

Chain 6, and for the first round, 4 chain, 1 d c in 1st chain stitch, 4 ch, 1 d e in next stitch. Repeat this, putting a d c in stitch so as to make 6 loops of chain.

Second round—* 1 d c, 4 t c, 1 d e into first loop of 4 chain. Repeat from * 5 times, putting a set of t e and d c into each loop.

Third round—3 chain, 1 d e into back part of stitch of second d e of the second round, 3 chain, 1 d c into the back of the next d e but one. Repeat four times more.

Fourth round—1 d c, 6 t c, 1 d e into each loop of chain.

Fifth round—4 chain, 1 d c into back part of stitch, as before. Repeat until there are six loops, as usual.

Sixth round—1 d c, 7 t c, 1 d c into each loop.

Seventh round—5 chain, 1 d c 6 times.

Eighth round—1 d c, 8 t c, 1 d c into each loop.

Ninth round—5 chain worked very loosely, 1 d c 6 times.

Tenth round—1 d c, 9 t c, 1 d c into each loop.

Eleventh round—6 chain, 1 d e 6 times.

Twelfth round—1 d c, 10 t e, 1 d e into each loop.

This completes the rose. Make a foundation of loops of chain for the leaves as follows:

5 chain, 1 d c into the back of the work 8 times, so as to make 8 loops for the leaves.

The position of the d c stitches can best be marked by putting pins into those loops into which they are to be worked. For one leaf, * 1 d c into one of the loops of 5 chain, 8 chain, 1 d c into the second stitch from the hook, 5 t c into the next 5 stiches, 1 d c in the last 9 chain, 1 d e in the second stitch from the hook, 5 t c, 1 d e, 1 d c into the lower part of the first leaf; then make the third leaf in the same way as the first, and 1 d c into the d c that was worked after the second leaf. Work 3 chain, 1 d c into next loop of 5 chain, 3 chain, 1 d c into next loop, then repeat from *. There should be four sprays, each consisting of three leaves. When these are done, fasten off and run in the ends. Join the thread again at the tip of the middle leaf at one of the corners.

First round—3 d e in this leaf, * then 8 chain, 1 d c in next leaf, 8 chain, 1 d c in next leaf, 8 chain, 3 d c into next corner leaf; repeat from *, and in the last corner,

loop the last chain to the top of the first d c with a slip stitch.

Second round—All d c, putting one into each chain and d c stiches of first round, and three into the middle of the three corner stiches.

Third round—3 d c in the corner stich, 1 d c in next stich, then work one tuft (5 t c into one stich, take the hook out of the last loop, put the hook into the first t c and draw the last loop through. All the tufts are thus made), 3 d c, 1 tuft.

Repeat till there are eight tufts with 3 d c between each, then work the d c, as above, in the corner and continue all round.

Fourth round—Like the third, but with 7 tufts instead of 8. The tufts are worked into the seeond of the 3 d c that were made between those of the preceding round, and three stiches are again worked between each.

Fifth round—As before, but with six tufts along each side instead of seven.

Sixth round—As before, but with seven tufts.

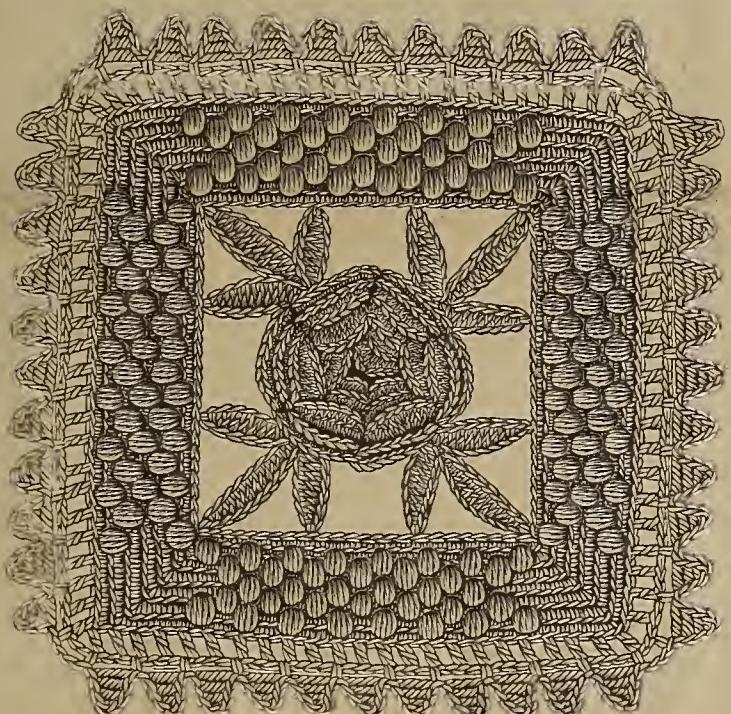
Seventh round—Like the third, but, of course, there will be a larger number of d c to be worked around the corners.

Eighth round—1 d e into every stich, and three in one at the corners.

Ninth round—In the corner, work 1 t c into the middle stich, 1 chain, 1 t c into the same stich, * 1 chain, miss 1, 1 t e; repeat from * till the second corner is reached, then repeat from the beginning of the round.

There should be twenty-two holes along each side, exclusive of the corners, and ninety-two in all.

Tenth round—1 d e over the first t c in the corner, 3 d c in the chain stich, 1 d c in the second t c, * 5 chain, 1 d c into the stich nearest the hook, 3 t c in the next three, miss 1 t c, 1 d e in the second. This completes one leaf. Repeat from * until the next corner is reached, then repeat from beginning of the row. There should



CROCHETED QUILT SQUARE.

be eleven leaves along each edge of the square, forty-four in all. When several squares are done, they may be joined by crocheting or sewing.

A beautiful tidy can be made from Belding's ball knitting silk. The rose, pink; leaves, olive-green; tufts, brown; outer leaves, olive-green.

NOVEL, DELICIOUS ICES.

There are baskets made of braided sugar candy, filled with ices imitating peaches, plums, etc., and flavored like the fruit.

A green melon can be served filled with rose-colored water ice, filled with the seeds of chocolate ice, while one of the latest ideas is a big leaf of green ice holding a handful of real strawberries.

At one dinner, cream was served in the hearts of real calla lilies, the centers of which were removed before the filling, while at another, pale, grayish chocolate ice was molded to represent a large, flat oyster shell closely shut.

Ice frozen into the shape of wax candles are a novelty, each of these having a little taper at the end, which, just before being served, is lighted, the cream candle being brought on in a china candlestick, with snuffers of candy.

LEMON PIE.

1 lemon,
1 cup of sugar,
½ cup of water,
1 egg,
1 tablespoonful of flour,
A little butter.

Grate the rind, slice the rest fine, omit seeds. Bake between two crusts. S. E. C.

New London, Iowa.

PRESERVES. JELLIES. & PICKLES.



CANNED GRAPES.—Carefully pick from the stems and wash the grapes. Remove the skins, dropping the skins in one vessel and the pulp in another. When all are thus prepared, put the pulps in a preserving-kettle over the fire, and stir constantly until the seeds come out clean. Then press the mass through a colander, add the skins to the pulp, weigh them, and to one pound of grapes allow one half pound of sugar. Boil one hour and a half and put in glass jars while hot and seal. Thirteen pounds of grapes and six and one half pounds of sugar will fill six quart cans.

CANNED PEARS.—

10 pounds of fruit, peeled, halved and cored, 5 pounds of sugar, 1 lemon, sliced, 1 teaspoonful of ground cinnamon, 1 teaspoonful of grated nutmeg, A piece of ginger-root, three inches long. Tie the cinnamon and nutmeg loosely in a thin muslin bag. Cook all together till the pears turn pink, then bottle and seal hot.

CANNED PEACHES.—

Pare the peaches with a silver knife, if possible; cut in half and lay in cold water till ready. Put on the stove a pound of sugar, with a quart and a half of hot water turned over it; let it cook to a sirup. Set your jars on a cloth in hot water. Fill your jars with the cold peaches, putting a layer of sugar between the peaches; when the jar is full of peaches, fill up with the hot sirup and seal immediately. The water the jars set in should come nearly to the top.

WATERMELON PRESERVES.—

Select one with a thick rind; cut in any shape desired; lay the pieces in strong salt water for two or three days; then soak them in clear water for twenty-four hours, changing the water frequently; then put them in alum water for an hour to harden them. To every pound of fruit use a pound of sugar; make a sirup of the sugar and a few small pieces of white ginger root and one lemon, sliced; take out the lemon and root, after the sirup has been boiled, and add the watermelon; let it boil until transparent; carefully lift it and put it in the jars, pouring the sirup over it.

CITRON PRESERVES.—

Select sound fruit, pare it, divide into quarters, carefully take out the seeds, and cut in very small pieces, any shape you desire, and weigh it; to every pound of fruit allow one half a pound of loaf sugar. Put the citron on to cook in water until it is quite clear, then remove it from the kettle where it can drain, and pour out the water it was cooked in; then put on the weighed sugar with water enough to moisten it through; let it boil until very clear, and before putting in the citron again, add to the sirup, two large lemons, sliced, and a small piece of ginger root to give it a fine flavor; then add the citron and let all cook together about fifteen minutes. Fill the jars with citron and pour over the hot sirup, then seal up.

Miss B. F., Stockton, Ala.

CITRON AND QUINCE PRESERVES.—Pare and cut the citron in inch pieces, boil hard in middling strong alum water thirty minutes, drain and boil in fresh water till the color is changed and they are tender; wash carefully the quinces, pare, quarter, core, and halve the quarters; boil the cores and parings in water to cover them, one and one half hours; remove them and add the prepared quince to the liquid; boil, and when they begin to be tender add the citron and three fourths of a pound of white sugar to every pound of the fruits.

SPICED GRAPE JELLY.—

Take grapes half ripe, crush all the juice out well and strain. Take equal quantities of juice and sugar; to each quart add one half a teaspoonful of cloves and one tablespoonful of cinnamon. Cook hard twenty minutes, then remove from the stove and pour into glasses.

Christie Irving.

PICKLED PEPPERS.—

Select large, green peppers (those called sweet peppers are the best); cut a small slit on one side so as not to cut off any part. Take out all the seeds carefully. Soak the peppers in salt water for six days, changing the brine several times. Chop onions, red cabbage, tomatoes, small cucumbers, green grapes, beans, okra, a few slices of carrots, some green corn cut from the cob, some horse-radish, whole mustard seed, celery seed and a little curry powder. Regulate the quantity of each ingredient by your own taste. Prepare as much of the stuffing as will fill to the natural size all the peppers you desire to pickle. Before filling the peppers, sprinkle all over the inside of them a little ground cinnamon, cloves and allspice; then fill in the stuffing, all well mixed. Sew up the slit neatly; place in a stone jar; cover with cold, spiced vinegar; cover up the jar closely and set aside.

BLACKBERRY WINE.—

Take three water-buckets of good, ripe berries; put them in a tub and mash well. Let them stand in a cool place for three days, mashing them well two

or three times a day. Then strain through a coarse sieve, let it set half an hour and strain through a thin sack. To every bucket of berries put four pounds of white sugar. Stir until the sugar dissolves, strain, put in a jar, tie a thin cloth over the top and let stand until October, when it is ready for use. This makes five gallons.

Mrs. I. B., West Louisville, Ky.

CANTALOUP SWEET PICKLE.—Take seven pounds of melons, not quite ripe, lay them in a weak brine over night. Then boil them in weak alum water till transparent. Lift them out and put them in a jar.

1 quart of cider vinegar,
2 ounces of stick cinnamon,
1 ounce of cloves,
3 pounds of granulated sugar.

Let this boil and add the fruit, cooking it twenty minutes longer. Pour it in a jar and cover closely. Scald it over for two mornings. Then seal it up tight.

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FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

Our Sunday Afternoon.

AS YOU GO THROUGH LIFE.

Don't look for flaws as you go through life,
And even when you find them
It is wise and kind to be somewhat blind,
And look for virtue behind them.
For the cloudiest night has a hint of light
Somewhere in its shadows hiding;
It is better by far to hunt for a star
Than the spots on the sun abiding.

The current of life runs either way
To the bottom of God's great ocean.
Don't set your force 'gainst the river's course
And think to alter it's motion.
Don't waste a curse on the universe—
Remember it lived before you.
Don't butt at the storm with your puny
form—
But bend and let it go o'er you.

The world will never adjust itself
To suit your whims to the letter,
Some things must go wrong your whole life
long

And the sooner you know it the better.
It is folly to fight the Infinite
And go under at last in the wrestle,
The wisest man shapes into God's plan,
As the water shapes into a vessel.

IDLENESS—NOT A FANCY SKETCH.

Do you lodge your boarders?"
Young daughter of the house replies, "Yes, all but our pastor and his wife. They have a beautifully furnished home."

"And do not keep house?"

"No; and she hires her washing, ironing and sewing done."

"What does she do?"

"Crochets."

What sort of a life is this for any reasonable human being? What a misfortune to the daughter of a wealthy city gentleman, or its equivalent, the daughter of a man who makes a show of wealth which he does not own!

"Is her husband a good man?"

"Yes, and he preaches excellent sermons. We all like her, but she is very unhappy. She does not seem to really enjoy herself a moment."

"I should not expect her to; but does she have any positive trouble to complain of?"

"Oh, she has a sister in Chicago who dresses very richly, and she seems to think she ought to have a new dress about as often as that sister."

There it is! As exalted an aim as could be expected from a person so trained, and living a life of busy idleness, with no more idea of work or care or responsibility for her use of time and money than a butterfly. Such a life is necessarily unhappy in the nature of things, for it is a constant violation of God's law of universal labor of some useful sort, for man and woman, and for woman equally with man. The cure of idleness falls as heavily upon her as upon her brother, and the effects are equally deleterious.

Farmers and farmers' wives, you often think your lot is hard, or that it has been; you often keep going when you have long felt too weary to take another step, or you remember when you did. You wish to spare your children all this. But beware that you do not, through mistaken kindness, thrust your son into some profession for which nature never intended him, or rear your daughter to a life of proud and lazy uselessness, thus entailing a curse upon her life.

SANCTIFIED PEOPLE.

The following significant paragraph is from the pen of Mr. Spurgeon. It may be plain, but it is worth while considering:

"On looking back through thirty years of church life, we are compelled to come to the conclusion that the most unsatisfactory members we have ever had have been those who were best satisfied with themselves. One brother became so thoroughly sanctified that he could not live with his wife, and another had so escaped from sin of every sort that he quitted us all in disgust. We find in the Sabbath-School the lay preachers' association, the Christian young men's meetings, and in all other forms of work, that as soon as any of the brethren or sisters begin to brag about their holiness, they become wholly useless, and before long the place that knew them knows them no more."

In the experience of the writer, the above has been proved times enough to

persuade us that it is a most unfortunate thing when real holiness is turned aside into presumption.—*Christian Advocate*.

A PRAYER OF GEORGE LAWSON (1749-1820).

Almighty God, who canst give the light that in darkness shall make us glad, the life that in gloom shall make us joy, and the peace that amidst discord shall bring us quietness, let us live this day in that life and that peace, so that we may gain the victory over those things that press us down, and over the flesh that so often encumbers us, and over death that seemeth for a moment to win the victory. Thus we, being filled with inward peace, and light and life, may walk all the days of our mortal life, doing our work as the business of our Father, glorifying it because it is thy will, knowing that when thou givest, thou givest in love. So, with these inward thoughts, may we keep that divine light in the soul which shall enable us to set our spirits in order and walk in obedience and trust, not failing to look forward with great hope. Bestow upon us the greatest and last blessing, that we, being in thy presence, may be like unto thee forevermore. These things we do ask in the name of Jesus Christ our Lord. Amen.

WHEN JESUS COMES.

Some people seem surprised at the eagerness which is displayed for the return of the Lord Jesus to this earth again by some Christians. But why should they not be eager for his return, when that return means reunion for the parted, immortality for the mortal, health for the sick, life for the dead, land for the landless, habitations for the homeless, plenty for the destitute, bread for the hungry, water for the thirsty, sight for the blind, hearing for the deaf, speech for the dumb, strength for the weak, youth for the aged, liberty for the captives, riches for the poor, "beauty for ashes," a "garment of praise for the spirit of heaviness," "the oil of joy for mourning," peace for the troubled, rest for the weary, gladness for the sorrowing, songs for the sighing, society for the friendless, perfect bodies for the crippled, mansions for huts, crowns for crosses, light for darkness, wisdom for ignorance, strength for weakness, harmony for discord, with an eternal inheritance in the kingdom of God for all his ransomed people.

UNBURNABLE TREASURES.

The Rev. John Newton one day called to visit a family that had suffered the loss of all they possessed by fire. He found the pious mistress, and saluted her with: "I give you joy, madam."

Surprised and ready to be offended, she exclaimed:

"What! Joy that all my property is consumed?"

"Oh, no," he answered, "but joy that you have so much property that fire cannot touch."

This allusion to her real treasures checked her grief and brought reconciliation. As we read in Prov. 15: 6, "In the house of the righteous is much treasure; but in the revenues of the wicked is trouble." I have never seen a dying saint who was rich in heavenly treasures who had any regret; I have never heard such a one say he had lived too much for God and heaven.—*Moody*.

ABUSE OF A WORD.

There is no term which is more abused than the word "practical." It is made to mean anything and everything, and those who are the most rabid in insisting upon it that theirs is the only orthodox and correct definition, are the ones who abuse it the most and lower it most effectually. They narrow it down until it is the synonym of imperfection and incompleteness; until it represents crude, blundering, rule-of-thumb methods. To accept the most frequently given definition of the word, it would apply to the rude methods of navigation of five centuries ago instead of to the superior and successful systems of to-day.

The tentative coast navigation of the Phoenicians would be called practical, and the scientific, systematic, every-day plan adopted by the ocean racers and the ocean beasts of burden, which run in a set course and leave and arrive by a predetermined time table, would be deemed "theoretical." How many sins are committed in the name of "practical" matters and "practical" doctrine!—*New York Continent*.

SILENCING A GOSSIPER.

A good woman, Jane Parsons, was anxious to be at peace with all, and particularly wished to be on good terms with those who lived near. But Agnes Saunders was such a great news-bag, that her calls on Jane were neither few nor far between. Nor did she appear to know the way out when she once got in. Jane found Agnes' conversation both unprofitable and disagreeable, for she made so free with other people's names. This made Jane unhappy, so much so that she dreaded Agnes' coming. She resolved to lay the matter before her leader, who was not long in prescribing a remedy.

"Jane," he said, "keep your family Bible on the table, and when she has been in the house long enough, ask her to read a chapter or a psalm, and pray with you."

Jane followed this excellent advice. "Agnes," said Jane, "you are a good scholar. I wish you would read a chapter or a psalm, and pray with me; it might do both of us good."

Agnes excused herself on the ground she was very busy. She would gladly do so another time when she could stay.

We need scarcely say that Jane had no further cause to complain of Agnes' gossiping in her house.

ONE MAN LIKES WHISTLING BOYS.

If ever in the course of human events heaven blesses me with an heir of the small boy class, I shall teach him to whistle early in his young career and encourage him to warble merrily away throughout the sunshine and the shade of youth and age.

I never see a youngster with his hands shoved down in his pants pockets, his head thrown back, his cheeks swelled out like a pair of bellows and his puckered lips piping a jolly tune, that I don't set that boy down as an innocent-hearted lad who wouldn't do anything more harmful than rob a watermelon patch or such; he wouldn't tell a malicious lie or do a cowardly trick.

These are the works of the sly youngster with the averted eye and the soft tread, who is afraid to whistle lest he make a noise and attract attention. The whistling boy never makes the footpad or the cutthroat, though he may never be president. I can't help having my suspicions about a man who never learned to whistle in his youth. In nine cases out of ten he has a falsetto voice and a bad digestion, and his ideas on many points of morality are questionable.—*Louisville Post*.

MOTHER'S TURN.

"It's mother's turn to be taken care of now."

The speaker was a winsome young girl, whose bright eyes, fresh color and eager looks told of light-hearted happiness. Just out of school, she had the air of culture which is an added attraction to a blithe young face. It was mother's turn now. Did she know how my heart went out to her for her unselfish words? Too many mothers, in their love for their daughters, entirely overlook the idea that they themselves need recreation. They do without all the easy, pretty and charming things and say nothing about it, and the daughters do not think that there is any self-denial involved. Jennie gets the new dress and mother wears the old one, turned upside down and wrongside out. Lucy goes on the mountain trip and mother stays at home and keeps house. Emily is tired of study and must lie down in the afternoon; but mother, though her back aches, has no time for such indulgence. Girls, take care of your mothers. Coax them to let you relieve them of some of the harder duties which for years they have patiently borne.

We want many thousands of new subscribers during August, and are offering very handsome presents to all who subscribe or renew this month. It will pay you to read page 379.

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All this seems strange to one who knows how troublesome other good lamps are.

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Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

KILLING THE LICE—RULES.

ALTHOUGH we have frequently given remedies for the destruction of lice, several of our readers have written us, and we believe that during this warm season a few hints will not be out of place. We give the following rules:

1. To destroy the red mites on little chicks, dust the chicks well with insect powder. Dust the hen also, as lice go from the hen to the chicks. For the large, gray lice, rub a few drops of melted lard on the heads and throats; but do not use kerosene. Very little oil or lard should be used, as grease is injurious to chicks.

2. To destroy lice on fowls, provide a dust-bath. Also dip each hen in soapsuds, rubbing the feathers well; dip them so as to immerse their heads and bodies well, and do not rinse them. Add a gill of crude carbolic acid to a bucketful of the suds, and have the suds strong. Do this on a clear day, so that the hens will dry quickly.

3. Saturate the poultry-house with kerosene—roosts, floor, walls, under the roof, and do not miss a crack or crevice. Spray it in, or use a watering-pot. The kerosene emulsion is also excellent. Keep the poultry-house clean, and remove the droppings daily during the summer. Repeat the work once a week, or as often as may be necessary.

MEAT AND MILK.

The two most available sources of nitrogen are milk and meat. The fat of the meat is of no value, as the hens can procure from the grains all material necessary for the yolk, but when the food is not varied, the nitrogen, which is so essential a factor in the albumen, is often lacking in the food, and the hen cannot supply eggs. Lean meat, either from the butcher or from the factories at which fat is rendered, will be found serviceable, but in the latter there is, at times, but very little lean meat. The bones, however, are reduced to a fine condition and are present, hence, such food is fully worth the price asked. Meat and bone from the butcher are the best materials, provided the bones are pounded and fed with the meat. Milk is excellent, but as it consists so largely of water, it is necessary for the hens to drink a quantity beyond their capacity to render it a substitute for meat, but nevertheless it is a valuable adjunct to the food at all times. Fresh milk or sour milk may be given the hens, but chicks should only be allowed fresh milk, and sour milk should not be given the hens if the fresh article can be had, but it may be allowed, however. All soft food may be moistened with milk, instead of water, with advantage.

OPERATING AN INCUBATOR.

Those who contemplate operating incubators will find November the proper time to begin, in order to have as many chicks hatched before February as possible. Always begin with a small incubator, and to learn well the operator will make no mistake if he begins earlier, as any experience gained previous to the time for hatching out chicks for market will be found valuable. The summer season can be used for learning how to best operate and manage.

KEROSENE ON POULTRY.

Kerosene (coal oil) is the best article for destroying lice, but it should never be applied on the bodies of fowls or chicks, as it usually injures them severely or kills them. Even grease, which is recommended as a remedy against the large, gray lice, should be used cautiously, and in very small quantities, a few drops being sufficient for a chick, as grease is an abomination to poultry. Kerosene has destroyed hundreds of chicks, and should be used only when the necessity for destroying lice occurs.

Silos and Ensilage are engaging the attention of our most prominent and progressive farmers, and are acknowledged by all to be very profitable. The Appleton Mfg. Co., whose attractive advertisement appears in our paper are headquarters for Ensilage Cutters and Carriers, Tread Sweep and Tread Powers for running them.

HOW TO CROSS.

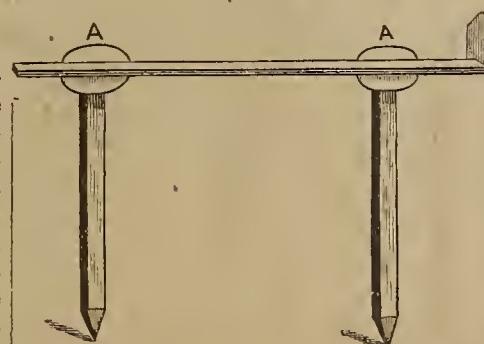
While retaining your best hens do not overlook the fact that the male is the most influential member of the flock in determining the value of the future stock. If you wish to increase the number of eggs from the pullets you desire to hatch out next season, the male should be a Leghorn, and this is the time when he should be procured, as breeders have a surplus. If eggs are secondary to market quality, cross with a large, vigorous Pitt Game male, and select large hens with which to mate him. When crossing for increased egg production, market quality should not be considered.

SCRAPINGS FROM THE YARDS.

The scrapings from the yards, that is, the earth that contains decomposed manure, will be found excellent for all kinds of flowers, and to save such material for that purpose will recompense for the work done. Such scrapings do not consist wholly of droppings, for there is always quite a large proportion of the food wasted, when it is fed in troughs, and this food, if of grain, is of itself quite valuable when in the condition as it exists on the top soil. By scraping the yards first and then spading them, the yards will be in better condition for the hens.

A RAT-PROOF ROOST.

A roost pole, proof against rats that attack chicks on the roost, is sent us by Mr. Robert Osterhorn, Missouri. The stakes are 2x2 inches, and three feet long, driven into the ground about one foot deep. The metal plates, A A, are ten inches in diameter (any old wash-basin or large pie-plate, inverted, will answer), and they



are placed centrally over the stakes; the pole, which is one inch thick and four inches wide, being nailed over them. The end pole (B), shown on one end, is used where the end of the pole comes near a wall that rats can climb. The end plate should be six inches wide, seven inches high and sixteen inches from the wall.

OIL-CAKE MEAL.

A convenient form of allowing linseed meal to fowls is to procure the pressed oil cake, and feed it by breaking it into small pieces. It can then be scattered, so as to allow each hen to secure a share. It should be given not more than three times a week, as it is fattening, and too much may not be beneficial. At first, feed it sparingly, a gill of the broken cake being sufficient for five hens. It may be increased each week, until as much as a pint may be given to ten hens at a meal. It is an excellent medicine for drooping hens that have been debilitated by lice or bowel disease, and it is also a harmless and nutritious food.

THE COMMON DUCK.

There is no profit made on the common puddle duck since the Pekins have been introduced, as the common kind are not only small, but of slow growth. To secure the largest returns from ducks, they must be in the markets at a certain period, and as the common ducks grow too slowly to come in early, they do not bring high prices. The Pekins are the favorite market ducks, and begin to come in about the beginning of May, the choicest weighing five pounds each. Crossing with Pekin drakes has not been satisfactory, the pure breeds giving the best results.

DOUBLE-YELK EGGS.

Double-yolk eggs are more numerous in summer than in winter. If you find a large number of eggs of unusual size, some containing double yolks, it indicates that your hens are too fat, and that you are overfeeding. It is not a matter of rejoicing to have hens lay double-yolk eggs, as they will lay but few of them before they will either cease laying or break down with fat, dying suddenly. When in the best condition the hens lay eggs of normal size, and lay regularly, until they begin to moult or become broody.

EXPERIMENTING.

Experiments with poultry are best made with small flocks. It is an impossibility to fully observe a large number of fowls so as to be familiar with all the details of management. Each hen is a subject herself, and will afford ample work to one who desires to learn more. The most successful persons are those who begin with a few fowls, study their characteristics, and gradually increase the number.

HEROIC REMEDIES FOR LICE.

When lice swarm on the hens it will be an excellent method, during a dry, warm day, to dip the hens. Take a bar of soap, dissolve it with boiling water, add a gill of crude carbolic acid, and then add sufficient warm water to have the water soapy. Dip each hen well, head under also, and

turn them loose. Do not rinse them at all. While dipping them, be careful to rub the water well into the feathers. Next, go into the poultry-house and clean it out, using kerosene, or the kerosene emulsion, freely. The dipping process should not be resorted to until the hens are so infested that only such method will prevail.

CORRESPONDENCE.

EGG-EATING HENS.—Having seen the question asked "how to break egg-eating hens of the vice," and never having seen a satisfactory answer given, I will send you my remedy, which is very simple, but effectual. Procure some porcelain nest-eggs, and put one in each nest for a nest-egg. Also leave some of them lying about on the floor of the hen-house, near the nests. After a few days of unsuccessful attempts to break the eggs, the hens will give it up as a bad job, and the cure is complete. C. D. J.

"An American Girl in London" is the title of the new book now meeting with great favor from the public. We offer a copy free to every one subscribing or renewing during August. See our page of great offers. Page 379.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Worms in Cucumbers.—E. C. M., Schalles, Mo. Send specimens of the worms infesting your cucumbers to Prof. D. S. Kellicott, Ohio State University, Columbus, Ohio.

Curing Sumach.—J. W. T., Tyrone, Pa. Cut off the young branches, dry in the sun, beat off the leaves and tender twigs with a stick, and when dry, grind between millstones and pack in sacks.

Foul Cistern Water.—A. J., Forrest River, N. D., writes: "Will you please tell me what to do with a 200-harrel cistern of rain-water that smells bad? The cistern is built of brick and cement, most all under ground, and gets plenty of air. We also stir it up often."

REPLY:—You can purify your cistern water by putting into it two or three pounds of caustic soda.

To Destroy Ants.—R. R., Acme, Pa., asks how to destroy the big black ants that come into his house. If possible, trace them to their nests. Pour in some bisulphide of carbon and stop up the entrance to the nest. The fumes of this volatile liquid will spread all through the nest and destroy every ant. You can trap ants in sponges moistened with sweetened water, and destroy them by scalding the sponges occasionally.

Preparing Soil for Onions.—C. S., Tuckerton, Pa., writes: "Would onions make better growth in soil made loose and fine with the spade, same as a garden, or in soil prepared by horse cultivation, so that a few inches of fine soil rest upon a rather compact layer?"

REPLY BY JOSEPH:—The onions will make good growth on rich soil prepared with the spade. Yet, I prefer ground prepared in the other way, simply because the deep, loose layer stimulates undue development of large roots, which detract from the solidity and value of the tuber. The deep, moist, loose soils have a tendency to produce the undesirable development known as "rumps," or "scallions."

Some Potato Queries.—Amateur, Mount Morris, Ill., proposes the following: "1. Which is the best garden seed drill? 2. Is there a successful potato planter? 3. Which is the best plow or machine for digging potatoes? 4. Is there a good plow for digging sweet potatoes? 5. Is flat cultivation ever practiced for sweet potatoes?"

REPLY BY JOSEPH:—1. Planet Jr. 2. The Aspinwall, made in Michigan, works to perfection; but I believe there is one or two more just as good. 3. Cannot say. There are several now being advertised in the paper that work very well in clean soils free from rubbish, stones, etc. An ordinary one-horse plow can be used with good results. 4. A digging-fork is about as good as anything. 5. Not on a large scale, that I am aware of.

Heating a Greenhouse.—A. H. H., of Quincy, Ill., writes: "I intend to build a greenhouse this fall, 20 feet wide and 100 feet long, for growing lettuce and vegetable plants. My means are limited. Can I heat it with a return fire?"

REPLY BY JOSEPH:—A house of this kind may be heated with a flue, but this method is now pretty much out of date. Hot-water pipes and furnace, it is true, are more expensive than a flue, but give you such vast advantages in the saving of coal and labor and worry, in greater convenience and pleasure, in greater uniformity of heat, and its better control, that I advise you, by all means, to use the hot water system. Inquire of Hitchins & Co., of New York, manufacturers of hot-water heating apparatus and fixings, or of some Chicago firm, stating size of house and your particular requirements, and they will give you prices and estimate of cost.

Recipes for Destroying Ants.—For the benefit of several inquirers, we republish the following: Take one pound of black soap, dissolve it in four gallons of water, and sprinkle the solution through a fine hose over the runs and nests, taking care, however, not to water the roots of the plants with it. Turpentine, gas-water, flowers of sulphur, lime-water, a decoction of elder leaves, chloride of lime dissolved in water, and camphor have all been used. For ants on fruit-trees, put a line of garter around the tree, and that will stop them. Ants in flower or garden beds may be destroyed as follows: Take two ounces of soft soap, one pound of potash and about two and one half pints of water; boil the whole together for some time, stirring the ingredients occasionally; the liquor may then be allowed to cool. With a pointed stick or dibble, make holes wherever the soil is infested; drop the mixture, filling the holes once or twice. Take small vials two thirds full of water and add sweet oil to float on the water to within half an inch of the top; plunge the vials upright in the ground, leaving only half an inch standing out, near the nest or runs of the ants. The ants will come for a sip and go home to die; no insect can exist without oil stopping up

its spiracles, or breathing-pores. Boiling water and arsenic are fatal; a coarse sponge dipped in treacle-water, and afterwards dipped in scalding water, will catch thousands. May be destroyed by a few fresh, unpicked bones being placed for them, or sponges wetted and filled with sugar, or treacle in bottles or pans.

VETERINARY.

Conducted by Dr. H. J. Detmers.
Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 37 King Avenue, Columbus, Ohio.

Slobbers.—B. C., Westfield, N. Y., writes: "We have a four-year-old colt that slobbers badly. Will you please give cause and cure?"

ANSWER:—What you complain of is usually caused by eating white clover of the second growth. As soon as the cause ceases to act, the effect, too, will disappear.

Manure Stains on Gray Horses.—C. F. E., Harvey, Ill., writes: "Please tell me how to take manure stains off gray horses. I use good soap, brush and sponge, but cannot get it all off."

ANSWER:—You can do nothing better than to liberally apply soap and warm water; to provide sufficient clean bedding, and to keep the stall as clean as you can. I had myself a white horse for five years, and although he delighted in rolling in dirt when allowed to do what he pleased outdoors, I never experienced any difficulty in cleaning, and found that usually a good brush, vigorously applied, was sufficient. Still, my horse was cleaned at least once every day.

Possibly Periodical Ophthalmia.—A. D. F., Berrien Springs, Mich., writes: "I have a colt about eight weeks old. It was born with a white film in the eyes; otherwise is all right. Can see a very little outdoors, but not in the stable. The dam is blind in one eye, said to be caused by a hurt several years ago."

ANSWER:—Your case, probably, is periodical ophthalmia, and if so, I have to refer you, in order to avoid unnecessary repetition, to the answer given under the heading, "Periodical Ophthalmia," in this column. If it is not periodical ophthalmia, the case needs a thorough examination by a competent veterinarian before any diagnosis can be made, and before any treatment can be applied.

Probably Foot-and-Mouth-Disease.—J. R. H., Newtonville, Ind., writes: "Please tell me what ails my cows, and what to do for them. Their lips and nose get sore; they cannot eat; they get lame in all their feet and legs. It seems to be contagious. They have been running in tame grass pasture all spring and summer. Some of my neighbors' cows have the same disease."

ANSWER:—Your cows, it seems, are afflicted with foot-and-mouth-disease, one of the most infectious diseases known. It is, however, not dangerous if the animals are well taken care of; besides that, it runs its course. It will be your duty to inform the proper state authorities, so that a further spreading may be prevented.

Periodical Ophthalmia.—H. N. M., Roby Texas, writes: "My mare's left eye got sore some years ago, two or three times, but did not stay sore long at a time. Last February it got sore and has been sore ever since. The eye appears as if it had been hurt."

ANSWER:—Your mare, it seems, is affected with periodical ophthalmia, or so-called "moon blindness," a disease which almost invariably proves to be incurable, and terminates in destruction of the eyesight. As a special predisposition for this affection is transmitted from both dam and sire to the offspring, and as it doesn't pay to raise horses that will get blind, all animals affected with periodical ophthalmia should be excluded from breeding.

Curb.—T. M., Teepleville, Pa., writes: "I have a colt that has a small curb. It is about one and one half inches long and three eighths thick. It has been there two years, and is smaller than it was. He has never been lame. Can it ever be cured?"

ANSWER:—If your animal is yet a colt, the curb will disappear in time, provided the animal is kept on nutritious food, and is not broken to work until of proper age. If the same is a young horse, it must be exempted from hard pulling up hill and from horseback riding, and at the same time receive nutritious food—plenty of oats. A medicinal treatment is hardly necessary in your case, and applied to advantage only in most severe cases, and where the curb is of recent origin.

Abortion.—S. W. G., Plumsteadville, Pa., writes: "Will you give cause and cure of abortion in cows? Four out of seven of my cows miscarried last year, dropping their calves about two months too early. The trouble is on hand again this year."

ANSWER:—Abortion in cows can have many causes; in fact, anything that produces a separation of the placenta, or that in any way causes the death of the fetus, will produce abortions. There is, of course, no cure, and where the causes have already acted, abortion cannot be prevented. Hence, all that can be done is to prevent the causes to act. What

you complain of, very likely, is epizootic abortion, produced by bacteria, which, in some way, find an entrance through the natural openings, and once entered, effect by their action a separation of the placenta. It is therefore, an infectious disease. To prevent it, the best that can be done is to at once remove all cows with calf to another uninfested place, away from where the bacteria are, and this done, to thoroughly clean and disinfect the old premises, where the cases of abortion occurred. Any cow that shows signs of abortion should also immediately be removed from the rest of the herd. Abortion of an apparently enzootic character is frequently also produced by feeding cottonseed oil-cake.

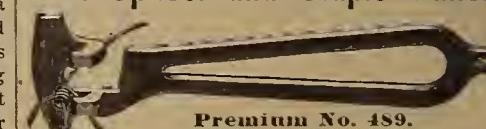
Foot Disease.—F. J. K., Morgantown, W. Va., writes: "There is a foot disease among the cattle here (cows and oxen are the only ones I have heard of) that no one seems to know anything of. I have an ox that first became lame, and upon examination I found a crack above the hoof, below the edge of hair, as in common foot evil. I applied butter of antimony, as I have done in other cases. That crack healed up, but a breaking out began back above the hoof and around the horny projections at the pastern joint. The hide cracked and had a yellowish appearance, and now it is peeling off and has a dry appearance. He has been ailing two weeks. Some cows have been ailing for some time. They peel off nearly all around the leg, from hoof up six inches. My steer was badly wintered when I bought him this spring, and was very poor, but was improving finely before he got lame."

ANSWER:—Your description leaves some doubt whether you have to deal with a simple eruption, common during the last two or three summers among cattle that have been kept in wet and muddy places, or with foot-and-mouth disease. I am inclined to think it is the former, and nothing else. If so, you will effect a cure if you keep the cattle in a dry and clean place, and liberally apply to the sore spots or places, say, twice a day, a mixture of liquid subacetate of lead and olive oil—one to three.

Bloody Milk—Probably Gangrenous Pneumonia.—J. A. P., Superior, Neb., writes: "I have a cow that gives bloody milk from her two front teats. Her calf was about ten weeks old when she began to give bloody milk from one of the teats; then, in about two weeks after, the other one commenced the same way. It is about five or six weeks now since she began doing so, and it is much worse the last day or two, chunks of clotted blood coming from both the affected teats. I have done nothing for her except thorough and persistent milking. We know of no cause why she does so, unless it is because she was served by the bull about two weeks before she began to give the bloody milk. She seems to be in a good, healthy condition now, but when I got her last January she could hardly get up when down.—I let my neighbors have one of my horses to work awhile. They brought her back while I was away from home, and tied her in the stable. She stood there forty-eight hours, without feed or water. When taken to water, she only snuffed and washed her mouth in it—would not drink or eat anything. Her head seemed to be entirely rotten inside, judging from the stench and pus which came therefrom. Was all right when taken away a few days before. Died next day after I found her. What was the matter, and what could I have done for her?"

ANSWER:—"Bloody milk" may have several causes. It may be caused by an existing inflammation or an internal injury in the mammary gland (udder); by rude and violent milking; by an increased supply, with blood (congestion) when the cow is in heat; by a sudden change of food, from rather poor and innutritious to very rich and highly nutritious food; and by eating acrid plants, containing sharp or resinous substances. The treatment consists in removing the causes. If the udder is congested or inflamed, sulphate of soda in slightly physicng doses, and small doses of saltpetre dissolved in mucilaginous decoctions (for instance, in a decoction of marsh-mallow root), may be given internally, while externally, applications of cold water may be made. Gentle milking must not be neglected. If acrid plants constitute the cause, moderate doses of saltpetre and of sugar of lead and of other astringents constitute the remedies. If the udder and the teats are exceedingly painful, perfectly clean milking-tubes may be used; great care, however, must be exercised in their application.—Your horse probably died of pneumonia, or gangrene of the lungs. You could not have done anything when the animal was returned, because it was too late.

Wire Splicer and Staple Puller.



No man who has Wire Fences can afford to be without it. With the Wire Splicer two pieces of wire can be spliced as neatly and strongly as it is done at the factory, one wire being wrapped tightly around the other, as shown in the cut. In combination with the Wire Splicer is a Staple Puller. Everyone knows how hard it is to get the staples out of fence post. With this little tool and a hammer they can be taken out as fast as the puller can be placed in position. The same tool also has a claw for drawing light nails or tacks, a hammer head for driving tacks, and the handle is in shape to use for a light wrench. Thus there is combined in this one tool half a dozen that would cost separately one or two dollars.

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Our Miscellany.

DON'T TELL.

When my big dolly gave a ball,
Of course I had to bake—
I know you'd never guess at all
Just how I made the cake!
Don't tell—I took the powder-box
From mamma's dressing-case—
You know there's one that never locks
And has a frill of lace.

Into this flour I put cologne
For flavoring—don't tell!
Then took a buttonhook—my own—
And mixed it very well.
I slipped it in the kitchen range,
And cook, she never saw;
But what to me seemed very strange,
The dough, when baked, was raw!

My dolly seemed to think it fine,
And so I gave her some
With an eggcupful of lovely wine—
My papa's best bay-rum.
The supper-table, after all,
I think, looked very well,
And now I've told you 'bout the ball—
But don't you ever tell!

—Wide-Awake.

THIRTEEN more women than men voted at the municipal election in Cawker City, Kan.

COTTON soaked in olive-oil and turpentine, and put in the ear, often stops earache of the most painful kind.

THE bank of Scotland issued one-pound notes as early as 1704, and their issue has since been continued without interruption.

AN old clipper ship has just made the fastest time on record between Japan and this country, being out but twenty-two days.

THE world will be nearer right when a man has learned to laugh a little less at his neighbor's troubles and a little more at his own.—*Atchison Globe*.

A DISTINGUISHED Egyptologist has recently unearthed, with a lot of his mummies, a will probably made 4,450 years ago, but, curiously, quite modern in form.

THE father of eleven sons has applied for a salaried position in a baseball club. He says he never played a game in his life, but he has had twenty years' experience in making base hits.

In eastern New Mexico nearly six hundred thousand acres of fruit and farm lands have been reclaimed by the construction of storage reservoirs and irrigating canals during the past two years.

IT keeps three large Chicago factories busy to manufacture the locomotive head-lights and railroad lanterns that are used in this country. The factories give employment to 1,100 men and boys.

DON'T expect a man to do anything for you on account of something you have already done for him, but if you intend doing more for him, tell him and get what you want in advance.—*Milwaukee Sentinel*.

MRS. MYSERLEE—"Oh, my dear Mr. Wings, you really can't go home in this terrible storm. Do stay and take supper with us." Wings—"Thank you; but it's really not so bad as all that."—*Munsey's Weekly*.

A GAINESVILLE, TEX., girl has probably the longest hair in the world. It is 10 feet 6 inches long. The present growth is of the past seven years, as in 1884 her head was shaved during a spell of brain fever.

WE will mail free to any address, a copy of our Home Treatment, a positive cure for Leucorrhea, Whites and all Female Weakness. Send self-addressed, stamped envelope. May Flower Med. Co., 85 Lake St., Chicago.

A BEAUTIFUL piece of sculpture from ancient Ephesus has reached the British museum. The relic forms part of a marble bull, the head being exquisitely carved, while the figure of a goddess appears on the body. It is supposed to be 2,000 years old.

IT is asserted that the idea of the slot machine is very old. In an inn in one of the rural districts of England the tobacco for the guests was kept in a box which was opened by an English penny; this box was certainly, so the landlord averred, 150 years old.

AT Gooseberry ravine, Nevada county, Cal., some boys recently found four pieces of float quartz containing gold to the value of \$6, \$18, \$23 and \$32, respectively. Prospectors have been thick in the ravine ever since, and one of them found a ledge which is believed to be the source of the float.

THE JUVENILE PHILOSOPHER.—Rev. Doxology (to Brother Bangs and his family)—"I am annoyed every Sabbath by Brother Money-fist. The old man persists in going to sleep with his mouth open. I wonder what he does that for?"

Bobby—"I guess he wants somebody to chuck a nickel into the slot."

A MAN in Vermont who neglected his wife finds himself confronted by a petition signed by over 100 of the best known women in the town and addressed to the court, asking for his dismissal from the office of county clerk. This kind of female suffrage made him sick, and the judges have postponed action until he gets well.

BEECHAM'S PILLS cure Bilious and Nervous Ills.

THE REMAINS OF ST. FRANCIS XAVIER.

The opening of the coffin in which the body of St. Francis Xavier has lain for nearly three centuries and a half, in the cathedral at Goa, appears to have been attended with great pomp and ceremony. A vast multitude of Roman Catholics, including the patriarch archbishop and the governor-general of Portuguese India, were present. The coffin being opened, all the assembled dignitaries proceeded to venerate the remains and kiss the bare feet, which for that purpose were left outside the glass-paneled case in which the coffin was deposited. Thereupon a great rush took place, everyone being desirous of kissing or touching the body, and it is stated that the utmost disorder and confusion prevailed in the church. The face and the feet are described as covered with dried integuments. Though the eyes had disappeared, both ears remained. The disappearance of the right arm was explained by the fact that this member was cut off long ago and sent to Rome, where it is still to be seen. The body was found to be only four feet and a half in length. Vespers were afterwards celebrated in honor of the saint, and in the evening the churches and public places in Goa were brilliantly illuminated.

HAS A THICK SKULL.

Abram Parsons, better known as "Abe, the Bunter," is one of the chief celebrities of Williamstown, Mass. He celebrated his one hundred and first birthday on the 1st of last July, but still remains hale, hearty and a character.

Parsons is a Negro, and began life as a slave in South Carolina, where he remained until fourteen years of age. Then he was sold to Stephen Miller, of Claverack, N. Y. He ran away, got to Connecticut, and from that on knew no master. To the thickness and peculiar formation of his skull he owes his celebrity. In the order of their occurrence is given this record of his greatest victories: Butted with a ram and killed him; butted in the door of Harvey Cole's burning store and made entrance for the firemen; butted a ferocious two-year-old bull insensible and then cut his throat; ditto a cow. Besides this, to amuse the students of Williams college, Abe once smashed a grudstone with his head. The old fellow is well liked by those who know him, because, as he says, he "never robbed a chicken roost." He has provided for the future of his aged wife by selling his body to a physician for \$100.

GIVE YOUR HOST A REST.

Never tax your entertainers with your presence all day long, when you are passing some days under a roof not your own. No matter how fond they are of you, your occasional absence—in your room or out for a walk—will be a relief to them; quite likely they will not know it is a relief, but at the same time they would know that they were taxed if you remained constantly within sight and sound. A tactful guest will know just when to be absent. If you are visiting a wife whose husband is absent, never prolong your stay till his return, as few men care to find guests in the house to entertain when they return, tired and nervous from a wearisome railroad journey. If your visit is only half finished, it would be tasteful to make some excuse to be absent for a day, at least, on the husband's return. Rob yourself of some pleasure rather than fail to make the servants some kind of a gift. The presence of a stranger in any house adds materially to the work, and servants do not get the pleasure out of entertaining which the host and hostess find. A little money or a gift of some kind will render servants gracious and obliging to guest and employer.

AFRICAN EXPLORERS.

A list of explorers who have crossed Africa has just been published in the Vossische Zeitung. It appears that from 1802 to 1811 the feat was accomplished by a Portuguese, Honorio de Costa; in 1838 and 1853 it was achieved by Francesco Colmbra and Silva Porto; in 1854, by Dr. Livingstone; in 1865, by Gerhard Rohlfs; in 1874, by Lieutenant Cameron and Mr. Stanley; then by Serpa Pinto and the Italians, Mattioli and Massari; next by Lieutenant Wissmann, who crossed from St. Paul de Loanda to Sadani on the east coast, from 1882 to 1884; and recently by the Scotch missionary, Arnat; the Portuguese, Capello and Ivans; the Swedish lieutenant, Gleerup, who occupied the least time, crossing from Stanley Falls to Bagamoyo in six months; the Austrian, Dr. Senz; Mr. Stanley for the second time; and finally Captain Trivler, the French traveler. The first explorer who crossed Africa took nearly ten years over the task, while the last occupied barely a year.

VARIOUS HUES.

Every once in a while the African mind will evolve an expression that has a wealth of grotesque poesy in it. An elderly man who is employed about one of the public buildings in this city was heard to remark:

"I dunno what I se gwine ter do for close foh all ob my family."

"Have you a large family, uncle?" said one of the clerks, in a quizzical tone.

"Deed I ls-seben chillun."

"Are they all the same color as you?"

"No, sah; dey varles, rangin' all de way fum dusk ter midnight."—*Washington Post*.

IT WILL COST YOU **NOTHING**

TO EXAMINE THIS WATCH. IF WE PAY ALL EXPRESS CHARGES! YOU PAY NOTHING. We are determined to introduce our fine Gold and Gold Filled Watches in every state, and different from all others, we offer as our leader the **FINEST SOLID GOLD WATCH WE HAVE**. We believe that many of the readers of this paper who heretofore have never answered advertisements will take advantage of our WONDERFUL OFFER and get a **SOLID GOLD WATCH** and help us introduce our goods.

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CAUTION! To protect us against dealers and speculators ordering in large quantities, we will only sell ONE WATCH to any person at \$19.75, after that the price will be \$39.50. READ THIS AD. CAREFULLY, and reason if you ever saw such a liberal offer before. A BETTER WATCH THAN WAS EVER ADVERTISED BEFORE. A \$100.00 Solid Gold Watch for \$39.50! EXAMINATION FREE!! WE PAY ALL EXPRESS CHARGES—YOU DON'T PAY A CENT!! Then after considering what we say, **Read What a Few of Our Customers Write.** Thousands write the same way.

LEMON FURNACE, Fayette County, Pa. DEAR SIR:—I send you by express today \$19.75 in payment for watch. I am surprised to find it such an elegant watch. I got the Express Agent to take it to Uniontown and have it examined by the best jeweler in town and he said the case itself was worth \$30.00. Send me your catalogue and prices and if I can get you any orders I will gladly do so.

EDENTON, N. C., April 8, 1891. A. C. ROEBUCK Esq., Minneapolis, Minn. Dear Sir:—Your watch received on the 6th, am very pleased with it and think it the best watch for the money that I have ever seen. And the way you send them convinces me that I am dealing with a fair and square house. Please send me your catalogue, prices and conditions as to the way you allow your agents to examine them. Yours Truly, C. C. MURDEN.

CARPENTERS EDDY, June 25, 1891. ROEBUCK & CO. GENTS.—Received the watch a week ago. Will say it far surpasses my expectation. For honest, square dealing I can recommend your house as one that gives more for the money than any other house in the United States. Yours, etc., J. D. BOGART.

We want you to order to-day. This paper may get lost and the ad. never appear again. Address **A. C. Roebuck & Co., 319 Nicollet Avenue, Minneapolis, Minn.**

Mention Farm and Fireside when answering this advertisement.

THE PERFECT MAN.

From the crown to the nape of the neck is one twelfth the stature of a perfectly-formed man.

The hand, from the wrist to the end of the middle finger, is one tenth of the total height of a man of perfect proportions.

A man of good proportions is as tall as the distance between the tips of his fingers when both arms are extended to full length.

The face, from the highest point of the forehead where the hair begins to the end of the chin, is one tenth of the whole stature of a man of perfect mold.

If the face, from the roots of the hair to the chin, be divided into three equal parts, the first division determines the place where the eyebrows should meet, the second the opening of the nostrils, if the man be perfect in form.

The proportions of the human figure are six times the length of the right foot. Whether the form is slender or plump, the rule holds good on the average. Any deviation from the rule is a departure from the beauty of proportion.

It is claimed that the Greeks made all their statues according to this rule.—*St. Louis Republic*.

CLASSICAL EDUCATION.

"Do you not think that American institutions are progressive?" inquired a Boston girl of an eminent English tourist.

"Indeed I do," was the hearty reply. "The classical education of even your railroad brakemen makes them far superior to the common guards of our English system."

"What do you mean by the classical education of our brakemen?" inquired the Boston girl, with no small show of surprise.

"Why, I notice they open the car door and call out the names of the stations in an unknown tongue. I am familiar with seven distinct languages, but your American brakemen are a gulf of learning compared to our most eminent scholars."

A DISMAL FUTURE.

Head of firm—"Mr. Wigling, ten years ago you came with me as an office-boy. Since then you have risen in my employ to junior partner, and you are now engaged to my daughter. Suppose, sir, that ten years from now I should die; what would you do then?"

Wigling—"I should probably have to support her."—*Harper's Bazar*.

VANDALISM IN GEORGIA FORESTS.

The long leaf pine belt of Georgia covers more than one half of the counties of the state. Well managed, it would yield, it is estimated, \$30,000,000 a year; but it is being recklessly destroyed by the turpentine farmers. It is claimed that 40 per cent of the pine now standing has been killed. There are now in operation, it is said, stills enough to sap the remainder of the timber in seven years, and all this for the price of 75 cents to \$1 an acre, which gives \$5,000,000 for the destruction of forests which in fifteen years of good husbandry would have yielded \$150,000,000 in lumber and naval stores without diminution of their own productiveness.—*Atlanta Constitution*.

THE LOGIC OF EVENTS.

Customer—"Not long ago I came in here and bought a porous plaster to help me get rid of the lumbago."

Clerk—"Yes, sir. What can I do for you now?"

Customer—"I want something to help me get rid of the porous plaster."—*Life*.

DENVER, COLO., February 16, 1891.

The Atlas came a day or two ago and am very much pleased with it. It is even better than I expected.

MRS. F. S. OSBORN.

MONTCLAIR, FLA., May 4, 1891.

Atlas received all right. It is far better than I expected. It should be in every household. Cook Book also received, which is also very good.

FRANK NELSON.

TREHERNE, MAN., April 27, 1891.

I received the Cook Book several weeks ago and am well pleased with it. Many thanks to you for it.

MRS. T. RING.

WALTON, ONT., March 12, 1891.

We received the Peerless Atlas a few days ago and are delighted with it. An agent through this way was selling the same style of a book, with different binding, for nine dollars. Everyone ought to take advantage of such an offer as this.

ANNIE M. SAGE.

MANSFIELD VALLEY, PA., March 12, 1891.

I received the Peerless Atlas of the World and am very much pleased with it, and would not like to be without it. It is splendid. Many thanks.

M. A. BODEN.

TO EVERY READER OF THIS REBUS.

1200 of these beautiful Watches given absolutely free to each of the first 1200 persons who will read this advertisement and send us the correct answer to this rebus.

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Smiles.

OUR KIND.

She knows no Latin, she knows no Greek,
But the purest American she can speak;
She knows the uses of her and she
And the proper places of I and me.
She doesn't use big words to tell
A story, although she can use them well;
In short, she's a girl without pretense,
With an ample supply of common sense.
And I'd rather have her any day
Than the girl who can parley voo frongsay.
—New York Press.

KINDNESS MISAPPLIED.

WHAT'S the matter?" asked the kind-hearted old gentleman of the boy who was weeping bitterly.
"I g-got two nice clean blocks, an' them fellers took 'em away from me."
"Well! well!" exclaimed the old gentleman.
"Did you want them very bad?"
"Y-yes, sir."
"Hasn't your mother any kindling?"
"N-no, sir, she ai-aint."
"Father too poor to buy any?"
"N-no, sir."
"Does he drink?"
"S-some."
"Humph. Very proper pride. I see it all," was the kind-hearted comment.
"But you wanted the blocks for kindling, didn't you?"
"N-no, sir."
"What did you want them for, then?"
"I waut 'em t-to hit together and m-make a dicens of a n-noise with, sir."
The kind-hearted gentleman turned the corner almost at a trot to avoid missing an appointment.—Washington Post.

AN UNLUCKY GIRL.

She can fix her hair in fashion, and her manner's rather dashing, and her dainty little shoes are just in style.
She can jahher French and German, and expound upon a sermon, and set a person crazy with her smile.
In the tastes that are aesthetic, and in mixing face cosmetic, they say she has no equal anywhere.
And in chewing tutti frutti, she enhances much her beauty, and the settings in her teeth are very rare.
She can thnmp a grand piauo, and can sing in great crescendo, and her style of elocution's very trim.
She has college education, is the pride of her relation, but she still persists in saying, "It is him."

—Oil City Blizzard.

THE PARROT SPOKE.

Some time ago, a captain, who had been on a long voyage, brought home a parrot. The parrot, who had been with him, had learned some of the sayings of the sailors. One evening the captain invited a friend to supper, and began talking about where he had been, to which the parrot replied:

"That's a lie!"

The captain was rather cross at this, so he covered the cage over. He still kept on with the conversation, and the parrot again remarked:

"What a lie!"

This so enraged the captain that he seized a jug of water and threw it over the parrot, and the bird screamed out:

"All hands on deck; another thunder storm!"

EQUAL TO THE OCCASION.

"Mary," said the lady of the house as the cook was leaving, "I think you are treating me shamefully, leaving without a day's notice."

"Indeed, I'm sorry, mum, an' if a reference will be of any use to you, mum, I'll give you one cheerfully."—Recorder.

HE MIGHT EASILY HAVE MISSED.

She—"Did you hear about young Tompkins?"

He—"No. What?"

She—"Took up a pistol and blew his brains out last night!"

He—"Must have been a mighty good shot."

A GOOD MEMORY.

"Excuse me, sir, but haven't we met before? Your face is strangely familiar."

"Yes, madame, our host introduced us to each other just before dinner."

"Ah, I was positive I had seen you somewhere. I never forget a face."

A HORSE'S FEARS.

"You can recommend this horse, then?"
"Certainly; he is as kind as can be, and there is only one thing that he's afraid of."

"What is that?"

"He's afraid somebody will say whoa to him and he won't hear it."

EVIDENTLY PIQUED.

Little Girl (timidly)—"Please, Mr. Storekeeper, I want to get some shoe-strings."

Storekeeper—"How long do you want them?"

Little Girl—"I want them to keep, sir, if you please."—Journal of Education.

AN APT PUPIL.

There is a popular young physician of this city who is blessed with two very pretty children—Dudley, who is five years of age, and Rose, who is three. The mother has been at great pains to teach Dudley to be always generous and chivalrous toward little girls.

She had occasion, the other day, to punish them for some mutual unruliness. The two culprits came up for sentence with trembling lips and frightened looks.

Dudley, who seemed to dread the ordeal even more than the younger offender, kept in the background persistently.

"Come here, you bad boy," said his mother. "What do you mean by pushing your little sister ahead of you?"

"Ladies first, mam ma," replied Dudley.

DOMESTIC ITEM.

Judge Peterby said to his colored servant: "You will have to quit. You attend to your work very well, but I am always missing things about the house, and every time it is you that takes them."

"Boss, don't send me off on dat account. Hit mus' be a cumfert ter yer when yer missin' anything to know right whar it am."—Texas Siftings.

HE KNEW.

"And when does the wedding take place?" inquired the old stationer, jestingly. "Why, don't you think—" she blushed and hesitated. "Ah, fraulein, when young ladies buy a hundred sheets of paper and only twenty-five envelopes, I know there's always somethug behind it."—The Christian at Work.

ACCOUNTED FOR.

"Bridget, this chair is covered with dust." "Yessum. Nobody's sat in it lately."

LITTLE BITS.

Man waz kreated a little lower than the angels; but, while an infant, he fell one day out ov his kradle, and hain't struk bottom yet.—Josh Billings.

"Nursin' aint what it used to be," said Mrs. Gamp. "They fix up all their medicines so nice nowadays that there aint no fun in makin' people take it at all."

Wibble—"Well, they don't boil heretics in oil, nowadays."

Wahble—"No; they merely roast them in religious papers."—Indianapolis Journal.

"It is very strange," said the amateur gardener; "I planted radishes there, and nothing but a lot of green stalks have come up, with not a blamed radish or sign of a blossom on 'em."

A woman in Missouri was shaved clean by lightning one day last week. That's just our luck. We poor men have to go to the barbershops and take our chances.—Detroit Free Press.

Awestruck visitor (in artistic studio)—"It must be very difficult to produce such an exquisite work of art."

Von Dauber—"Nonsense! Almost anybody can paint a picture, but finding a rich fellow to buy it after it is painted is where the art comes in."

Wife—"I wish you'd tell the nurse to wash baby's face and hands, and put on his clean clothes."

Husband—"Why, my dear, are you going to take the baby out this kind of weather?"

"No, darling, I thought I'd let him play with Fido for a while."

Three times within a year a young man of Burlington, N. J., failed to meet his sweetheart at the matrimonial altar according to promise, but the fourth time he was on hand and the marriage was consummated. The patience of the lady in the case, is to be commended, and yet it is questionable whether the reformation of the idiot was worth the persuasion it cost.

"My wife has a saving disposition," said Hicks. "When we got our upright piano she made a red plush cover for it, so that the rosewood wouldn't get scratched. Then she covered that with a sort of linen duster arrangement, so as to save the plush. I tell you women have great big minds."—Harper's Bazaar.

A certain little girl, who is just learning to read short words, takes great interest in the big letters she sees in the newspapers. The other evening, after she had kept her mamma busy reading the advertisements in the newspapers to her, she knelt down to say her prayers. "Dear Lord," she lisped, "make me pure," then she hesitated, and went on, with added fervor, a moment later, "make me absolutely pure, like baking-powder."

"You know, Dorothy, these biscuit of yours"—he began, as he reached across the breakfast-table and helped himself to the seventh. "Yes?" said his wife, with a weary, feeble smile. "Ah! they're nothing like mother's." "No?" And the smile was gone. "No! Not a hit. You see, mother's were heavy and gave me the dyspepsia, while yours are as light as a feather, and I can eat about—why, what's the matter, Dorothy?" She had fainted.—Kate Field's Washington.

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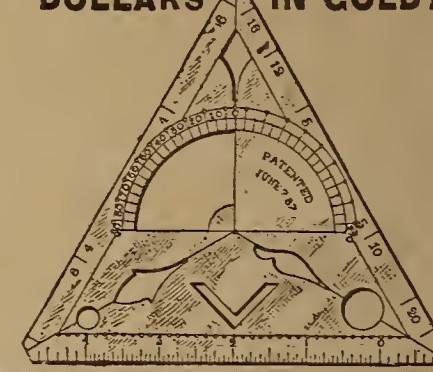
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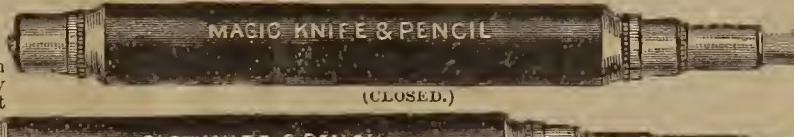
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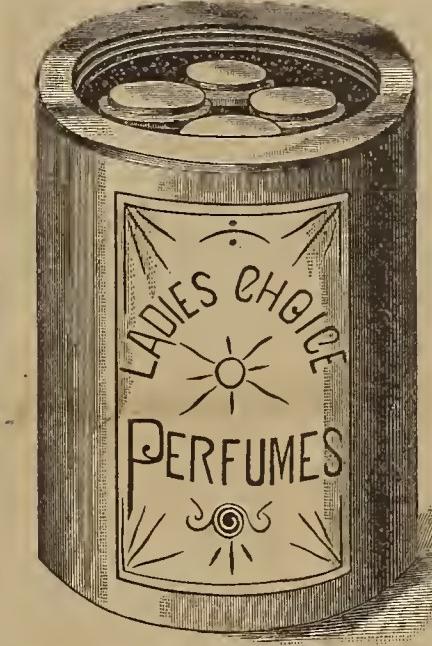
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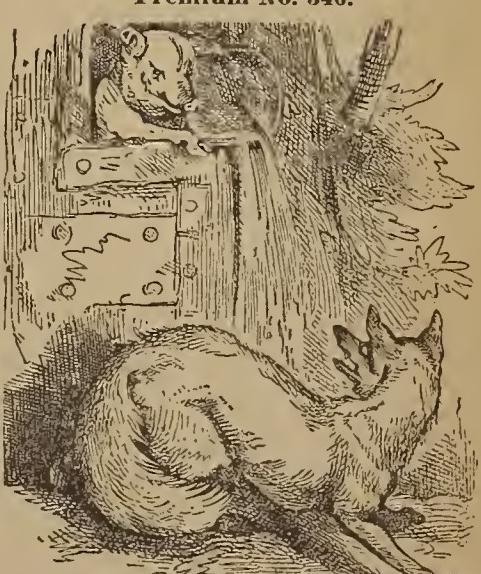
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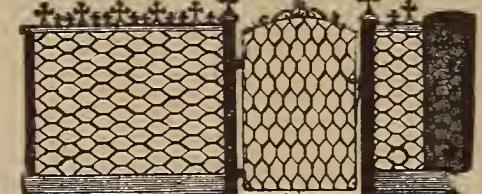
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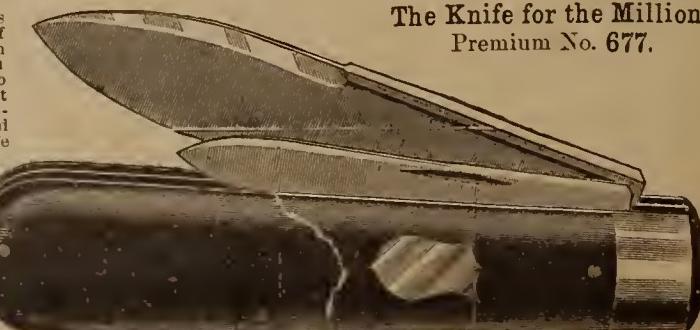
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FARM & FIRESIDE.

EASTERN EDITION.

VOL. XIV. NO. 23.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, SEPTEMBER 1, 1891.

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100,200 copies, the Western edition
being 150,400 copies this issue.

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Current Comment.

THE first convention of the People's party of Ohio was held at Springfield the first week of last month. The platform adopted demands that taxation shall not be used to build up one interest at the expense of another; the abolition of national banks, and as a substitute, the issue of full legal tender treasury notes in sufficient volume to conduct the business of the country on a cash basis; government loans directly to the people in sums not exceeding \$5,000 to any one person, on real estate or other ample security, at a rate of interest not to exceed two per cent; free and unlimited coinage of silver; opposes extravagant expenditures by the national government; demands prohibition of alien ownership of land, and that the government reclaim from railroads and corporations all excess of lands held by them and not in use; a graduated tax on incomes; favors woman suffrage; demands the payment instead of the refunding of government bonds; the government ownership of all the means of transportation and communication between the people of the United States; favors liberal pensions to soldiers, their widows and orphans; demands that the state constitution be amended so that municipal governments cannot be changed without the consent of the people; that acts of the legislature must, on demand, be ratified by vote of the people before becoming laws; that the charter of the Standard Oil Company be forfeited; the suppression of gambling in futures of all agricultural and mechanical products; rigid enforcement of all laws against adulteration of and counterfeiting of all food and drink products; favors the election of senators by the direct vote of the people; demands free school books and compulsory education; prohibition of child labor under the age of fourteen years; the rigid enforcement of the eight-hour law. The following resolution was approved and referred to the national convention: "We believe that the solution of the liquor problem lies in abolishing the element of profit, which is a source of constant temptation and evil, and we therefore demand that the exclusive importation, exportation, manufacture and sale of all spirituous liquors shall be conducted by the government or state at cost, through agencies and salaried officials in such towns and cities as shall apply for such agencies."

There were very few opposing votes to any plank in this remarkable conglomeration of greenbackism and nationalism. The delegates were earnest, enthusiastic, and doubtless the most of them were honest. The farmers seemed to be in the majority, but it was clearly evident to

every candid observer of the proceedings that the convention was controlled from platform and floor by leaders of labor organizations and resurrected politicians of the old greenback party, and that the farmers were "not in it."

Judging from the speeches made, from the approving applause of the delegates, and from all the actions of the convention, the political movement which it represents is nothing more or less than a revival of greenbackism. The chief demand of this new party is the unlimited issue of fiat money by the government, to be loaned at two per cent or less on "real estate or other ample security," through an army of political brokers.

The financial plank involving inflation, depreciation and repudiation, is the main one of the platform. The free coinage plank is superfluous. That brilliant conception, the federal liquor plank, is only a worthless little trap, with both ends open, set for unwary prohibitionists and personal liberty men.

In spite of determined efforts on the part of many of the farmer delegates, the convention nominated for governor its only logical candidate, John Seitz, the father of greenbackism in Ohio.

Drawing votes, as it will, from both the old parties, this new party will not affect the general result on the state ticket. By forming coalitions with the minority party in close counties, it hopes to secure enough members of the legislature to hold the balance of power and control the election of the next United States senator from Ohio.

IT might be well to call the attention of the land-loan advocates who are railing against railroads to the fact that under the land-loan bill introduced in Congress, railroad and all other corporations owning land could borrow money on it from the government at two per cent as easy as the farm owner. Not only that, but there are provisions deviously concealed in the bill that would enable land-owning corporations to get the lion's share of the benefits. The fact that the Alliances so generally approve of the Stanford bill, shows how little they really know about it.

WITH one army of official pawn-brokers placing government loans of fiat money on real estate and "other ample security," and another army of salaried politicians retailing drams from government saloons, what a great field there would be for the revels and riots of political corruptionists!

Once intrenched in power with two such armies in reserve, a party could defy every effort of the people short of a revolution in arms to turn it out.

OHIO farmers within one hundred miles of the state capital, will find something of special importance in the veterinary department this issue.

As soon as the rigid, scientific tests now in progress have been completed, FARM AND FIRESIDE will contain something of very great importance on the same subject for farmers in every state in the Union.

THE twenty-third biennial session of the American Pomological Society, will convene at Washington, D. C., on September 22, 1891, and continue three days. Full information and programs can be obtained from the secretary, Mr. G. B. Brackett, Denmark, Iowa.

THE Treasury Department has published the following statement in regard to the amounts of money in circulation on the first of July of the years 1860, 1865, 1885, 1889 and 1891:

All the statements furnished are made upon precisely the same basis.

The amount of each kind of money in the treasury and the remainder is given as the amount in circulation.

There is nothing omitted from the statement which should appear there, except minor coins (nickels and pennies), and they are left out of all the reports because of the difficulty in estimating the amount of them in use.

As the amount at the present time is certainly greater than in the earlier years, their omission will not be unfavorably criticised by those who contend that there is now a scarcity of money.

The amount of money in circulation in 1860 was about \$435,000,000, and the amount per capita was \$13.85.

In 1865 there was \$723,000,000 in circulation, and the per capita amount was \$20.82.

Twenty years later the circulation was over \$1,292,000,000, and the per capita was \$23.02; while on January 1, 1891, the amount was nearly \$1,529,000,000, with \$24.10 as the per capita allowance, the highest in the history of the United States.

Owing to shipments of gold to foreign countries, there has been a decline since January 1, 1891, not only in the per capita amount, but in the total circulation.

On August 1, notwithstanding the outflow of gold, the total was about \$1,500,000,000, and the amount per capita was \$23.37.

THE malicious lying done by political demagogues and calamity prophets about mortgages has been exposed by the census returns. Instead of 9,000,000 mortgages on land, with the encumbrances amounting to more than its value, as repeatedly asserted by these enemies of the people, the returns show that there are about 2,250,000 homes and farms occupied by owners encumbered by mortgages. As there are about 12,500,000 families, less than one fourth live in encumbered homes.

Two billion five hundred and sixty-five million dollars is the total amount of the mortgaged indebtedness on homes and farms, estimated to be about one third the value of the property encumbered.

The census returns also show that about two thirds of the total mortgage indebtedness represents purchase money.

The lying will still go on, however. It is extremely popular with a class of people who are looking forward to a time when they can, under cover of finance laws passed with the intent in view, repudiate their honest debts.

THESE are numerous complaints this year about the loss of wheat from smut. Smut is propagated by minute spores, invisible to the naked eye. The spores sown with the seed wheat this fall will sprout and grow in the wheat plants and blast the heads next harvest. To prevent smut, the minute spores clinging to the grain must be destroyed.

Dipping the seed-grain in a weak solution of blue vitrol has been successfully practiced on the Pacific coast for a number of years past. A new, simple and sure remedy is to dip the grain in hot water. Place a bushel of wheat in a coffee-sack and dip it in a vessel of water

kept constantly at a temperature of 140° to 145° Fahr. Let it remain a few minutes, moving it about so that every grain is thoroughly wetted. The seed can be readily dried by spreading it out on the barn floor and stirring it occasionally. The drying can be hastened by mixing it with land plaster.

FROM threshing reports it is evident that the actual yield of wheat exceeds the crop estimates based on the data published by the Department of Agriculture before harvest. Instead of a total yield of 525,000,000, it will nearly reach 600,000,000 bushels, and give over 200,000,000 bushels for export.

So much the better. There is a foreign need for every bushel of it at a fair price. If wheat is not crowded too rapidly on the early market, present prices will undoubtedly advance and be maintained.

Another very important feature, besides the size of this year's crop, is the fact that it was uniformly good all over the country. The money received for it will be widely distributed, thus conferring the greatest possible benefit on the whole country.

THE Ohio State University offers a free scholarship in the two years' course in agriculture, to one young man from each county, each year, who shall be approved by the agricultural society of the county. The university would like to have a large number of students in the school of agriculture. Every county in the state ought to have a representative young man who desires to avail himself of the opportunity to get a practical business training for the pursuit of agriculture and horticulture, or to become fitted to fill a position as agriculturist, horticulturist, botanist or agricultural chemist. The next college year begins September 16th. The secretary of the school of agriculture, Professor William R. Lazenby, Columbus, Ohio, will furnish catalogues on application.

WHEN it costs between three and four per cent for the government to disburse the pension fund, how is it possible for the government to loan money on "real estate and other ample security" at two per cent? Easy enough. By raising enough to make up the deficiency by extra taxation? No. Simply by printing enough fiat money to pay all the expenses.

With fiat money, there is no use of the government collecting any revenues at all. Taxation can be abolished. Simply let the federal government print enough fiat money to pay the salaries of its office-holders, and all its other expenses.

THE honest enforcement of the federal meat inspection law, with the microscopic examination for trichina, in the hands only of experts, will open the German and French markets to our pork products. Is it being done?

Evasion of the law and the export of any but perfectly sound and healthful meats will result in keeping the foreign markets closed, and in doing an incalculable damage to the producers in this country.

FROM complete returns received by the Commissioner of Internal Revenue, the bounties to be paid on the next sugar crop will approximate \$11,000,000. The crop is expected to reach 550,000,000 pounds.

FARM AND FIRESIDE.

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We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

COMMENTS ON CURRENT AGRICULTURAL LITERATURE.

BY JOSEPH. (T. GREINER.)

CAULIFLOWER GROWING.—For a vegetable that finds so general appreciation as a culinary article, and especially as an almost ideal pickling material, the cauliflower is neglected by the kitchen gardener, in the rural districts, to an extent that is astonishing. One of the reasons, probably, why cauliflowers are rarely grown in the farmer's garden, is the reputation the crop enjoys of being one requiring great skill, or especially favorable conditions; and another reason, the high price of good seed, which alone is worth planting. These objections are in a measure true, although I find it is easy enough to produce in the home garden all a family may want, with little effort and expense. On the other hand, it is also true that the person who understands the simple requirements of the crop, and has suitable soil for it, will find cauliflowers more profitable than almost any ordinary fruit or vegetable crop he might grow. In fact, there are at least thousands in it.

These observations are confirmed in "The Cauliflower," a new work of 230 pages, bound in cloth, written and published by A. A. Crozier, Ann Arbor, Mich. Price, \$1.00. Mr. Crozier is well known as a wide-awake horticulturist, and, as he has been growing cauliflowers for market to the extent of from three to five acres annually for a number of years, it seems he has had practical training enough to make him a thoroughly competent teacher.

The book takes in the whole of the subject, from seed to table. In regard to soil, Mr. Crozier says, almost any kind will do, provided it is moist and fertile; but a strong, sandy loam is generally best. Light sand or gravel is the poorest, and unless made very rich and artificially watered, it is useless to attempt to grow cauliflowers on it in ordinary seasons. The land, of whatever kind selected, cannot be made too rich, and barn-yard manure, well rotted, is best for general use. Plants are grown in beds, in same way as cabbages, and the same care is required to protect them from the flea-

beetle attacks. Soil for the plant-beds should be rich and fine, rather light, and improved, if necessary, with a little of the finest, old rotted manure. A small amount of lime or ashes raked into the soil will be of benefit. Transplanting the young plants in the seed-bed will render them stocky and vigorous, and should always be practiced with the early crop, but if the seed is sown sufficiently thin, it is unnecessary with outdoor plants intended for the late crop. Mr. Crozier also refers to the method of sowing seed directly in the hills in open ground where the plants are to remain, but evidently he does not think as well of it as I do. This method was recommended by Mr. Gregory, many years ago. The objection I then found to it was the difficulty of protecting the young plants from the flea-beetle. In recent years I have had no trouble in this respect, and now I hardly ever practice any other method. It really simplifies cauliflower culture to such an extent that I think it should have deserved a little more consideration at Mr. Crozier's pen. The time for sowing will depend, of course, on the locality and variety. At the North, the half-early varieties, intended for the fall crop, are usually sown and set out about the same time as late cabbage. In western Michigan, Early Paris is sown about May 12th, and set out about the 20th of June, begins to head in September, and forms its main crop in October, about the time desired. In the latitude of New York City, the time for setting out the main crop is from June 20th to the 1st of August. Plants set out at the latter date are intended to head just before winter, and must be of the earliest varieties.

Mr. Crozier speaks well of the seed grown on the Puget Sound, by H. A. March and A. G. Tillinghast, and this with good reason. American-grown cauliflower seed, I think, will take the

package of Snowball or Erfurt, or set a few plants every year hereafter.

COTTON-SEED AND COTTON-SEED MEAL FOR Cows.—The use of the former waste material, cotton-seed, in its original form, or as meal, is now being urged with increasing emphasis for feeding purposes. The Alabama Agricultural Experiment Station (Auburn), according to Bulletin 25, has made some investigations concerning the effects on butter by feeding cotton-seed and cotton-seed meal. The following conclusions are drawn from the tabular statements: (1) The quantity and, to some extent, the quality of the milk and butter vary with the feeding. (2) The milk increases in richness, or yield of butter, by the use of cotton-seed and cotton-seed meal, but diminishes in quantity. The opinion of some that the quality of butter and milk is not affected by the feed-stuff, is not sustained by these experiments. (3) Cotton-seed and cotton-seed meal increase in a marked degree the melting point of butter, the increase in these experiments amounting to eight or nine degrees centigrade, and diminish to a corresponding extent the volatile acids, while the specific gravity remains virtually the same. The richness of cotton-seed meal in albuminoids, or crude protein, renders it of prime importance to mix it with one or more feed-stuffs, poor in this nitrogenous compound, such as ensilage, hay or cotton-seed hulls. No change was observable in the color of the butter from feeding cotton-seed and cotton-seed meal. All samples were of a beautiful, golden yellow. The comparative daily rations used in these experiments, each for ten days, were as follows: First period (preparatory and experimental), ground oats, five pounds; ground corn, five pounds; bran, five pounds. Second period, cotton-seed meal, three pounds; ground oats, four pounds; bran, five pounds; ensilage, eleven pounds. Third period, cotton-seed

or shod, where they are weighed and emptied. The weight of the basket is deducted and the net weight put down under the name of the picker, in a book kept for the purpose. If there is no cotton-pen or other shelter near at hand, the farmer usually drives his wagon out into the field where the pickers are at work, and the cotton is weighed, emptied into the wagon and hauled to shelter.

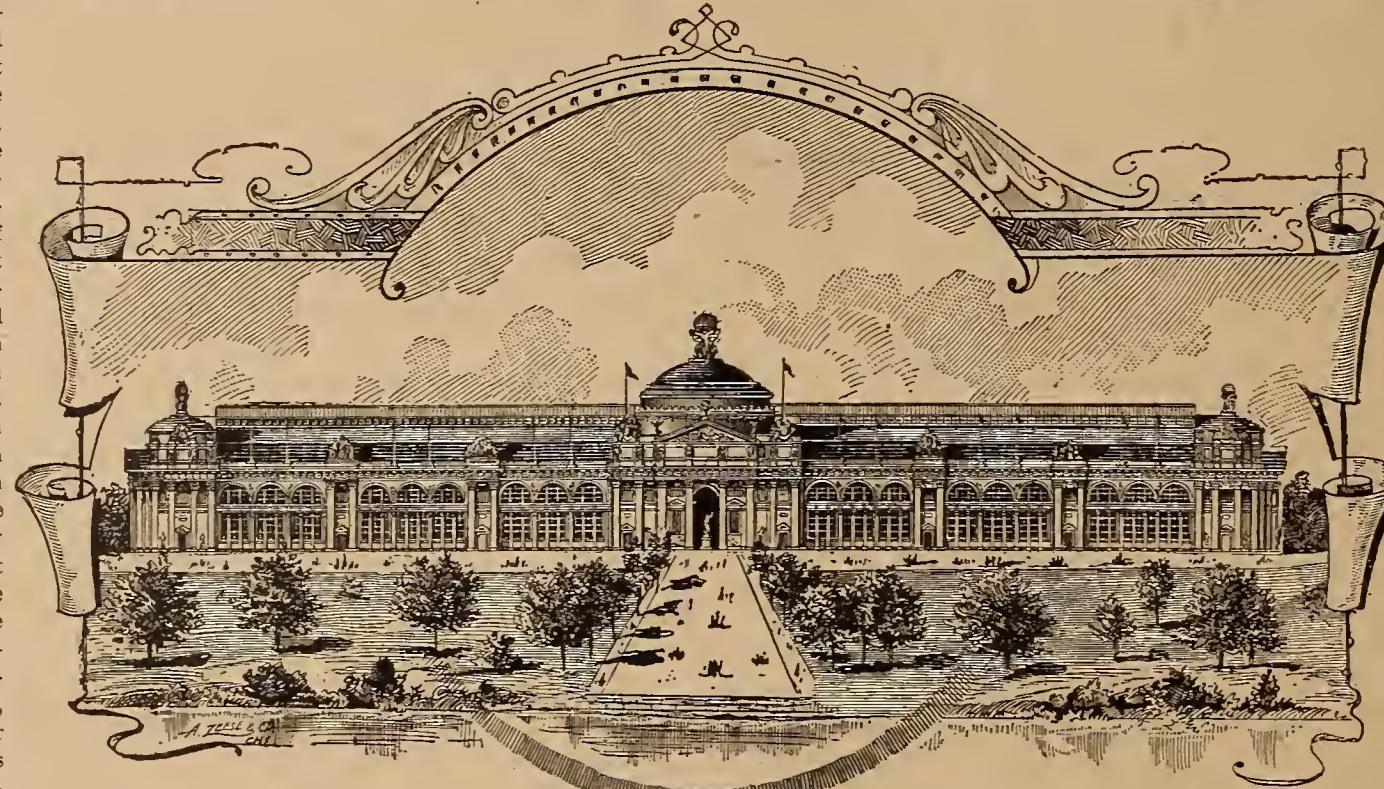
A common, but unwise practice, prevails in many sections, of piling the cotton on the ground in the field, until "a more convenient season" for its removal. More or less dirt clings to that which is next to the ground, and in case of rain, much damage is liable to follow.

Cotton picking is pretty trying to one's back for the first few days of the season, especially if the stalks are low. Some pickers wear pads on their knees, and do a great deal of work in a kneeling posture.

It is a great relief to the back to adopt that position occasionally. Female pickers, who cannot very conveniently wear pads, use their pick-sacks to kneel upon. When partly filled, they make very nice cushions for that purpose.

There is no class of work in which individual capacity varies more than in picking cotton. The amount gathered runs all the way from seventy-five to three hundred pounds a day. Some strong, robust men are distanced by delicate women and girls. I am speaking now of white cotton-pickers. The slender, feminine fingers seem to be much more dexterous in removing the fleecy locks than the large digits of men are. I have known several white women who could easily pick from two hundred to three hundred pounds daily for several consecutive weeks. Generally speaking, one hundred and fifty pounds is considered a fair day's work.

While the great bulk of the cotton crop



AGRICULTURAL BUILDING, AT THE WORLD'S FAIR, CHICAGO, 1893.

With the exception of the Administration building, the Agricultural building will be the most magnificent structure on the exposition grounds. In size it is 800 by 500 feet, severely classic in style. It is almost surrounded by lagoons. The features of this building are its five pavilions, one at each corner and one in the center. The corner pavilions are 64 by 48 feet square. The grand entrance is on the north. It is 60 feet wide, leading into a vestibule 30 feet deep and 60 feet wide. At the entrance are Corinthian columns 5 feet in diameter and 40 feet high. Beyond these massive columns is the rotunda, 100 feet in diameter, surmounted by a glass dome 130 feet high. There are eight minor entrances 20 feet wide. The roof will be principally of glass.

place of most of that heretofore imported from Europe, and it ought to be sold cheaper.

In regard to the further treatment of the crop, cultivation, covering the heads to protect from sun, etc., gathering, marketing, cooking, etc., I have to refer my friends interested in this vegetable to the book itself.

My friend, Prof. E. S. Goff, of Wisconsin, says: "I incline to think that there is a fortune in store for the energetic young man who finds a favorable locality for growing this vegetable, near any of our large cities, and who makes a specialty of the work." I do not wish to urge everyone to rush into cauliflower growing for profit, but the fortune is in it, if you will only know how to dig it out with judgment, skill and perseverance. On the other hand, I urge every home-gardener, especially the farmer, whose family would enjoy the delicate flavor of well-grown cauliflowers, to give up the idea that cauliflowers are beyond his skill and province, and to plant a

meal, four pounds; cotton-seed hulls, nine pounds; ensilage, four and a half pounds. During the fourth period the cattle were confined exclusively to raw cotton-seed and cotton-seed hulls; and during the fifth period, to cooked cotton-seed and cotton-seed hulls. They were given as much as they would eat.

SEPTEMBER IN THE SOUTH—COTTON PICKING.

The first of September is regarded as the opening of the cotton-picking season in the South. It is the beginning of the cotton year, in fact, though, in reality, cotton picking begins two months earlier in the extreme southern counties.

The gentle autumnal breezes bear upon their wings the first intimations of cooler weather, and suggestions of heavier clothing and cheerful fires. The mornings are deliciously cool and the grass is heavy with showers of dew. Midday and afternoon are like summer, however, but darkness again brings us that delightful coolness which makes a light blanket a

comfort to one's repose. Oh, the loveliness of our balmy September nights!

In the country, September is a busy season. On the cotton farms the Negro cotton-pickers are astir by dawn, for, in their own vernacular, "de airy nigger gits de heavy basket." The full import of this proverb is this: In the early September morning the cotton is heavy with dew, and, of course, the early picking weighs more than the late. Cotton-pickers are paid by weight—usually sixty cents per hundred pounds—and no deduction is made for dew. Another incentive to early picking is the ease of gathering the moist, dew-laden locks. The hulls, or sections, of the open boll are moist and soft while the dew is on them, and much more pliable and pleasant to handle than when dry and hard; and they yield more readily to the nimble fingers of the pickers. Furthermore, there is a sort of vegetable glue, similar to that of the okra pod (a near relative of cotton, by the way), which is secreted at the end of each lock, and which holds the cotton in the boll long after it has opened. The heavy dew moistens this glue, and makes the removal of the cotton easier than when it is dry.

The "regulation outfit" of a cotton-picker consists of a long sack or bag, made of heavy Lowell or sail duck, and a basket. Three feet is the usual length of the sack. A wide band of cotton cloth suspends it from the picker's right shoulder. It hangs down at the left side low enough to drag the ground a little, thus relieving the picker of the greater part of the weight. A strong basket, made of white oak splints, is set at a convenient and central point of the field of labor, and when the pick-sack becomes inconveniently heavy it is emptied into this basket, and the cotton tramped in tightly with the feet. At noon and night these baskets of cotton are carried on the heads or shoulders of the pickers to a cotton-house

or shed, where they are weighed and emptied. The weight of the basket is deducted and the net weight put down under the name of the picker, in a book kept for the purpose. If there is no cotton-pen or other shelter near at hand, the farmer usually drives his wagon out into the field where the pickers are at work, and the cotton is weighed, emptied into the wagon and hauled to shelter.

A common, but unwise practice, prevails in many sections, of piling the cotton on the ground in the field, until "a more convenient season" for its removal. More or less dirt clings to that which is next to the ground, and in case of rain, much damage is liable to follow.

Cotton picking is pretty trying to one's back for the first few days of the season, especially if the stalks are low. Some pickers wear pads on their knees, and do a great deal of work in a kneeling posture.

It is a great relief to the back to adopt that position occasionally. Female pickers, who cannot very conveniently wear pads, use their pick-sacks to kneel upon. When partly filled, they make very nice cushions for that purpose.

There is no class of work in which individual capacity varies more than in picking cotton. The amount gathered runs all the way from seventy-five to three hundred pounds a day. Some strong, robust men are distanced by delicate women and girls. I am speaking now of white cotton-pickers. The slender, feminine fingers seem to be much more dexterous in removing the fleecy locks than the large digits of men are. I have known several white women who could easily pick from two hundred to three hundred pounds daily for several consecutive weeks. Generally speaking, one hundred and fifty pounds is considered a fair day's work.

While the great bulk of the cotton crop

is harvested by negroes in those sections where the negro population is largest, yet in other portions of the South the entire crop is planted, cultivated and harvested entirely by white labor. As to a cotton-picking machine supplanting the human hand, there seems to be great doubt. At all events, hand-picked cotton will, in all probability, long continue to be in demand, even should a successful machine harvester be brought out. It is hardly probable that any machine could gather cotton as satisfactorily as can be done by hand, except as to rapidity of work.

A cotton field is generally picked over at least twice—often three times—before all the staple is gathered. The first picking, which is generally done in September, is the best, as the bulk of the crop is then open, and is gathered before the fall rains have beaten it out and discolored it. The entire crop should be gathered by or before the first of November. It seldom pays to attempt to gather cotton after that date.

DICK NAYLOR.

YIELD OF WHEAT VARIETIES UNDER THE SAME AND DIFFERENT CONDITIONS AT THE EXPERIMENT STATION.

The following table gives the principal results of a comparative test of fifty-one differently-named sorts of wheat at the Ohio Experiment Station.

The wheat was grown on bottom land, a part of which had been in wheat in 1890 and a part in clover that year. The wheat on the clover sod lodged about a month before harvest, while that on wheat stubble lodged but little and gave as large a yield of grain, averaging a better weight per bushel. The nine lots last named grew on the stubble.

Not all the differently-named sorts on this list are really distinct. We find no difference as yet between Sibley's New Golden, Tasmanian Red and Mediterranean; between Reliable and Valley, and but little, if any, between these and Egyptian; between Red Fultz, German Emperor and "Michigan Amber," but the latter may be wrongly named; between Silver Chaff, Martin's Amber and Landreth; between Royal Australian and Clawson; between Diehl-Mediterranean and Missouri Blue Stem.

It will be noticed that the largest yield this year has come from Rudy, Surprise, Valley and its synonyms, Democrat and Russian Red, while several other sorts follow closely behind.

NAME OF VARIETY.	YIELD PER ACRE.	WEIGHT OF MEASURED BUSHEL.	DATE OF RIPENING.
Wyandot Red.....	32.00	58.5	July 1
Velvet Chaff (Penquite's Velvet).....	27.00	60.0	June 30
Mediterranean.....	34.50	57.5	July 1
Lehigh.....	31.16	58.0	July 1
Hindostan.....	30.16	59.5	July 1
Sibley's New Golden.....	33.00	58.0	July 1
Tasmanian Red.....	33.16	52.0	July 1
Democrat.....	38.16	60.5	July 2
Deitz.....	30.66	60.0	July 2
Lebanon.....	31.00	60.0	July 1
Reliable.....	32.11	60.0	July 1
Valley.....	39.58	59.0	July 1
Egyptian.....	37.25	60.0	July 2
Red Fultz.....	32.41	58.0	July 1
Michigan Amber.....	32.66	58.5	July 1
German Emperor.....	32.33	51.5	July 1
Poole.....	35.91	58.5	July 1
Witter.....	35.66	57.0	June 30
Nigger.....	31.66	59.0	June 23
Diehl-Mediterranean.....	37.66	60.0	July 1
Miller's Prolific.....	33.00	59.0	June 30
Sheriff.....	33.83	54.5	June 29
Big English.....	31.66	61.0	July 1
Tuscan Island.....	33.58	55.0	July 1
Surprise.....	40.91	56.0	July 3
Mealy.....	36.08	50.5	July 2
Golden Prolific.....	35.58	55.0	July 1
Russian Red.....	37.33	57.0	July 3
Hicks.....	33.66	56.0	June 29
Fultz.....	35.66	53.0	June 29
Ontario Wonder.....	29.00	60.0	July 2
Currell's Prolific.....	27.75	58.0	June 28
Improved Rice.....	30.00	57.0	July 2
Extra Early Oakley.....	29.83	59.0	July 2
Silver Chaff.....	30.16	57.0	July 3
Martin's Amber.....	28.83	60.0	July 1
Landreth.....	25.33	52.0	July 3
Royal Australian.....	24.50	57.5	July 4
Theiss.....	30.50	54.5	July 2
Oregon.....	32.00	58.5	July 1
Longberry.....	27.50	55.5	July 1
Crate.....	27.50	57.0	July 2
Miami Valley.....	35.33	60.5	July 1
Rudy.....	40.50	61.0	July 3
Wisconsin Triumph.....	33.41	62.0	June 30
Rock Velvet.....	33.00	61.5	June 30
Early Ripe.....	34.83	60.0	June 30
New Longberry Red.....	32.08	60.0	July 1
Wabash.....	34.83	61.0	July 1
Missouri Blue Stem.....	31.08	60.0	July 1
Bearded Monarch.....	26.66	59.0	July 1

Soils absorb the decomposed products of animal and vegetable matter.

Soils draw off and hold certain portions of minerals from their solutions.

The best time to apply a nitrate is in the growing season.

Soils absorb from solutions, phosphoric acid.

THE SUPPLY OF PHOSPHATE.

For a score of years the phosphate mines of South Carolina have been profitably worked, and for a few years past their aggregate output has reached something like 500,000 tons per annum. So far there seems to be no perceptible decrease in the natural supply of these mines, nor any diminution of the sources of supply. Indeed, Florida now comes to the front with untold mineral wealth of the same kind. Nearly every week we read of newly-discovered phosphate mines in the flowery peninsula, and the excitement and speculation incident to these discoveries almost equals the gold fever of California in '49.

And now comes Texas with no mean claim as a phosphate-producing state. It is reported that immense deposits of this mineral exist on our coast in the vicinity of Rockport and Aransas Pass. So we may safely conclude that the phosphate supply is practicably inexhaustible. In near proximity to the Texas phosphate mines are the great bat caves of southwestern Texas, with their immense supply of the best guano.

The phosphatic rocks are ground up and made into fertilizers, and their great supply gives us an assurance of better

drought, all save two are making an excellent growth. All were mulched with coarso, strawy, barn-yard manure. All were watered during the continuance of the dry weather, and all, save these two, had received a mulching of ground plaster at the rate of one half bushel to the tree. The plaster was applied several days before the straw, as spring work delayed the application of straw. Whether the lack of thrift in those two trees is due to the want of the plaster is not certain, but evidence would point that way.

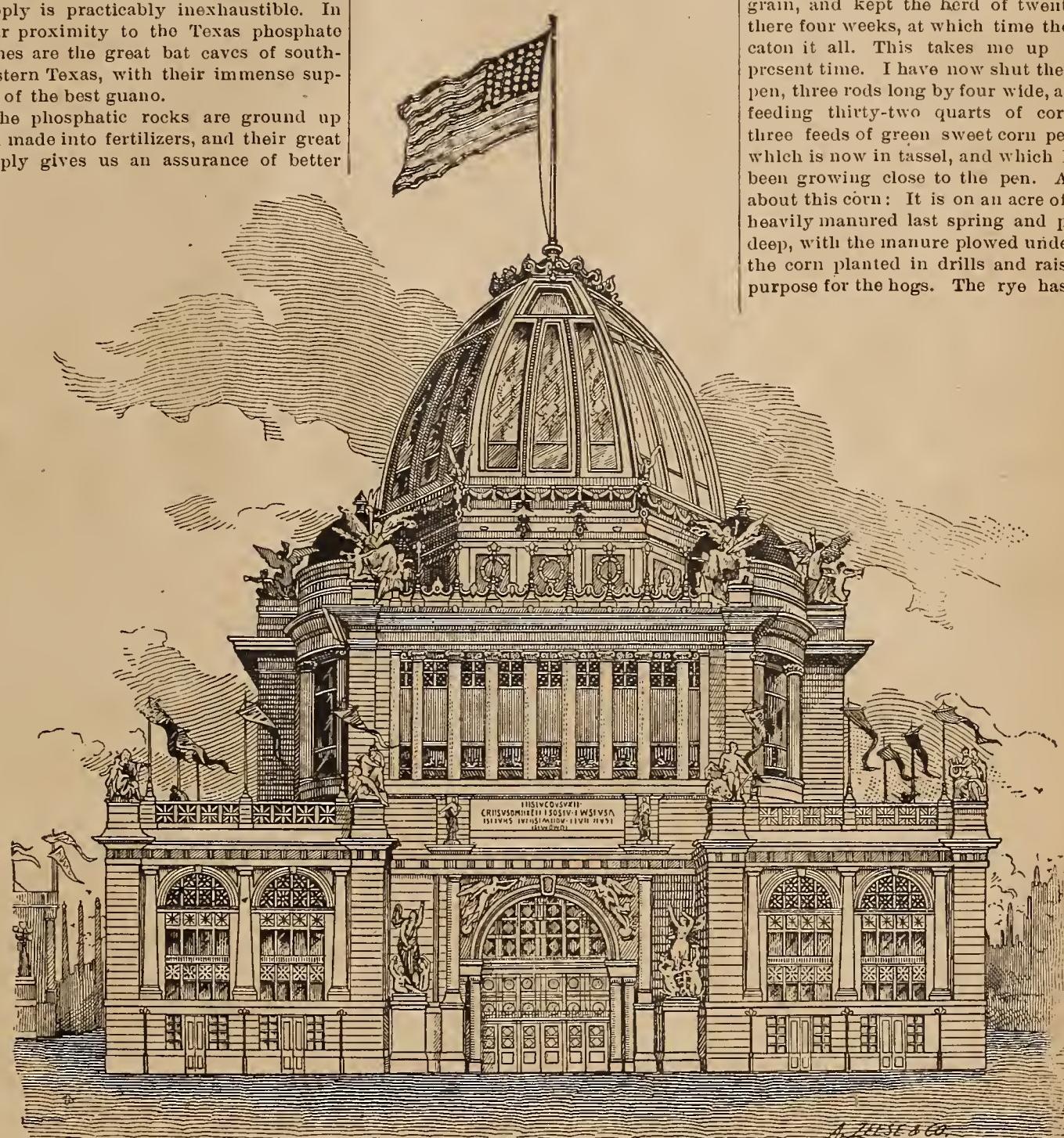
The plaster was also applied to currants and raspberries. Those receiving the plaster set almost twice the amount of fruit as those not thus treated. The fruit, too, was larger, richer and of a better color. A few old apple-trees received an application of the plaster and are well filled with fruit, while others not thus treated set less fruit or are now dropping much. It would thus appear that the

if, by this precaution, we can save so much larger per cent from loss? If, through this additional care, the trees can be brought into bearing a year earlier, is it not also economy to spend the time that may thus be required?

JOHN L. SHAWVER.

RYE, OATS AND GREEN CORN FOR HOGS.

I keep on my farm of eighty acres from thirty to fifty hogs. As I can hardly spare land enough to raise corn for so many, I resort to other methods. Last September I sowed four acres in rye, and when it was well up in the spring, turned the hogs on it. With a little corn and plenty of clean water, with the slops from the house, they did well; were healthy and grew finely. I kept them there until the rye began to ripen. I then turned them into a one-acre field of oats that was just beginning to head out. I then kept giving them plenty of water, but stopped feeding corn or any grain, and kept the herd of twenty-five there four weeks, at which time they had eaten it all. This takes me up to the present time. I have now shut them in a pen, three rods long by four wide, and am feeding thirty-two quarts of corn and three feeds of green sweet corn per day, which is now in tassel, and which I have been growing close to the pen. A word about this corn: It is on an acre of land, heavily manured last spring and plowed deep, with the manure plowed under, and the corn planted in drills and raised on purpose for the hogs. The rye has been



ADMINISTRATION BUILDING AT THE WORLD'S FAIR, CHICAGO, 1893.

This building is the gem of all the architectural jewels of the Exposition. It will cost \$650,000 and cover a space but 250 feet square, yet it is one of the noblest achievements of modern architecture. The building consists of four pavilions, 84 feet square, one at each of the four angles of the square of the plan, and connected by a great central dome, 120 feet in diameter and 260 feet high. In the center of each facade is a recess, 93 feet wide, within which is a grand entrance to the building. Externally, the design is divided into three principal stages. The first stage consists of the four pavilions, corresponding in height with the buildings grouped about, which are 65 feet high. The second stage is of the same height, and is a continuation of the central rotunda, which is 175 feet square. The third stage is the base of the great dome, 40 feet high and octagonal in form, and the dome itself rising in graceful lines, richly ornamented with heavily molded ribs and sculptured panels, and having a large, glass skylight. The interior effects will be even more gorgeous than the exterior, resplendent with carvings, sculptures and immense paintings.

times for southern agriculture. In fact, they have done, and are doing, wonderful things for the agriculture of the older southern states, and we may expect much material benefit to result from the discovery of phosphate on the Texas coast.

The American Agriculturist says in this connection:

"The discovery and development of these Florida phosphates is a matter of national importance, guaranteeing, as it does, an abundant supply of plant food at reasonable prices."

THE BENEFITS OF MULCHING.

During a season of protracted dry weather, one can readily appreciate the benefits of mulching to trees and shrubbery. The moisture being retained in the ground, the tree or shrub well mulched will continue to make satisfactory growth, when others not thus protected will wither and die. Out of a lot of more than fifty fruit-trees set out last spring, just at the beginning of the spring

fruit-grower may increase his crop in a single season sufficiently to repay for the application of the plaster.

A mulching of well-rotted sawdust was applied to a lot of seedling evergreens, because of the ease in application, and, though the loss has not been great, and that probably due to the midsummer drought, it is not so well adapted to trees. Some may inquire if it will pay to mulch.

Such have only to try the experiment to be convinced. A number of trees set out four years ago, and well mulched, made excellent growth each year, some bearing fruit the second year. Several orchards planted at the same time in the neighborhood have made no perceptible growth, and fully twenty-five per cent of the trees have been lost.

After going to the expense of purchasing a good collection of trees, and after taking the trouble to carefully plant these trees, is it not imminently proper that we should take the little additional precaution of mulching and cultivating them,

cut, a fair crop, notwithstanding the hogs pastured on it, and the field sown again to rye, oats and corn, mixed. This was done about July 4th. It is now six inches high, and can be cut late for fodder or turned into fall pasture. The acre oat field is also plowed and sown to oats.

Nebraska.

E. A. RUSSELL.

Boils, Pimples

And other indications of impure blood, including

Scrofula

Salt Rheum, etc., cured by

Hood's Sarsaparilla

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

DO VINES MIX?—I will have to ask my friend, D. B. Weir, to read my articles a little more carefully before he undertakes to criticise them. Candidly speaking, I do not like to have him parade certain views as mine, and proceed to pound them to pieces, when I have never expressed such views, nor intend to fatter them. Please quote me correctly, if you do so at all, my friend. Altogether I am too practical to follow Mr. Wier upon the field of speculation and unprofitable theory. There are more things *possible* in nature than we dream, even if they do not always, or even usually happen. Vines *do* mix. Different varieties of cucumbers mix very readily with each other; so do different varieties of melons and pumpkins, etc. It is probable that melons mix with cucumbers, although less readily; and it may not be impossible for pumpkins to mix with melons. I called attention to Professor Bailey's experiments as allowing that while varieties of the same species may mix quite readily, hybrids between different species, under ordinary conditions, are rather the exception. And this brings me to the practical aspect of the problem. The question which the home gardener is apt to ask is: Can we safely plant cucumbers and melons and squashes of all kinds together in the same patch without fear of having the product tainted and worthless by mixture? Can good melons be grown by the side of cucumbers, etc.? In reply I can only state that for nearly twenty years I have grown all these vines, often a great number of varieties of each kind, in closest proximity, and frequently intermingling; yet when using pure seed have never failed to get the true type of each vegetable, have never been able to notice the least influence of one kind upon another except in the progeny of melons or cucumbers, etc., thus grown, and even then in fewer instances than one would have expected. I only preach what I practice. Use pure seed, and it will make no difference, so far as the immediate product is concerned, how closely together you plant your various varieties and species of vines. Further than this I, and with me the average grower, are not greatly interested in the matter. I am not riding theoretical hobbies.

SEED-SOWING IN AUTUMN.—The season has remained dry. We had once a pretty good downpour, but it did not last long enough to soak the ground. In fact, we have had no soaking rain since last winter. The ground is drier now than ever. One of my leading principles (hobbies if you will) as a gardener is to keep the garden occupied. Give it work and it will not be in mischief producing weeds, etc. My last sowing was done late in July, fortunately not long before the last light rain, which made the seed germinate quite readily, and the young plants of various kinds of turnips, winter and summer radish, onions (for fall transplanting or sets), etc., are up in full numbers, although not growing any too fast in this heat and drought. Old onions are ripening somewhat prematurely in one of my patches, and consequently make room again for further planting. Spinach for autumn use, perhaps kale, are the next things.

The question only is how to get the seed to grow if dry weather continues. If the ground is in good condition, and can be broken up very fine, I fear little difficulty. The ground is plowed and otherwise put in good shape for sowing, and while it is fresh and moist, the seed should be deposited in drills rather deeper than in a moister time, and thoroughly firmed. Should a rain come soon, however, the task will be much lightened, but we should act promptly. Don't let the ground dry out again before getting the seed in. Just as soon after the rain as the soil can be properly worked, plow and harrow, and get the ground ready; then sow seed without unnecessary delay. The point is to put in our work just at the right time, and we can make the garden look as fine in September and October as in the early part of the summer, and certainly we can have as much good from it.

INSECT REVIEW.—So far as the attacks

from insects are concerned, this is the most remarkable season for many years. The potato-bugs are certainly gone from here, and if we are to have an attack worth mentioning next season, the new supply must come from elsewhere. I might almost say there isn't a bug left here now to act as guide to newcomers. Paris green is played out for the present. Ladybugs alone, although quite numerous, cannot be credited with such a happy result. Other causes, such as infectious diseases, small parasites or peculiar atmospheric conditions, must have aided in this. Whatever the cause, the result is highly gratifying. A subscriber wrote me asking to send him some ladybugs. I replied that there is no doubt about plenty of ladybugs being present in his own locality. I do not know a thing that might be done to aid in the propagation and spread of the useful and handsome little creature. I have seen them in New Jersey in their winter quarters in such quantities huddled together at the foot of a big buttonwood-tree, that it would have been easy to gather them by the quart. Yet there were not enough, even with the aid of plenty of soldier-bugs, etc., to keep the potato-bugs in check. We will have to leave it pretty much to nature to work out the problem in her own way. If we could discover an infectious disease of the potato-bug, the matter would be much simplified, as such disease can be spread more easily and rapidly than we could hope to propagate ladybugs.

There is yet a wide field open to us for investigation in this matter of fighting our insect enemies. I mentioned in an earlier issue, Mr. J. T. Moulton's suggestions. In a letter dated August 1st, he writes that I have yet said nothing of "willfully enfeebling catch-plants for the purpose of inviting attack; nothing of the chance that varieties may be developed expressly for this service; nothing of the partiality of insects for bruised, or wounded, or wilted vegetation; nothing of the patent odors produced by chemical means." Altogether, there is ample room for the display of skill, and for scientific research in this field.

Of course, if injurious insects remain as scarce as they were this season—almost as "scarce as hens' teeth"—this scientific research will lag simply for want of fuel to feed it. People are just as lazy as they dare to be, and nothing short of dire necessity is the mother of invention. So long as we do not fear the entire loss of our crops by insect attacks, and are not forced to keep up the fight to save our hide, we will be very apt to let matters take care of themselves. I have hardly seen a yellow-striped cucumber-beetle, and but few black squash-bugs this season. Cabbage-worms are not over-abundant, and easily succumb to a single application of bhuah. There were some flea-beetles, and a few radish-maggots, but not enough of either to do much harm. If this state of affairs continues, what will become of our experiments? And the literature on the subject will also cease to interest the readers of agricultural papers.

THE DOG NUISANCE.—Sometimes there is trouble between neighbors on account of hens, or even pigs, trespassing and making themselves obnoxious in the neighbor's garden. Usually, however, people show good, common sense in this matter. I have always found, with rare exceptions, that if the injured party puts his grievance before his neighbor in proper shape, the latter will see the point and try to keep hens or pigs at home. Of course, the garden owner who suffers loss by depredations of his neighbor's stock might also look to the law for redress, but this would in no case be wise. We can get along without lawing, and save money, time and temper. A simple notification, in friendly, kind words, seldom fails to have the desired effect. But when it comes to dogs—and cats, too—the case has a different aspect. Common sense is at once thrown overboard. A neighbor's dog may enjoy himself in my garden chasing small birds, or even chicks put there as living insecticides; he may tear my vines down and to pieces, or make paths through my fine onions by pulling them over and perhaps out; or killing small evergreens, etc., with his caustic urine; yet my neighbor would laugh in my face were I to ask him to chain up his favorite dog during the gardening season. By common consent, the dog has the free-

dom of the town, and the privilege of painting it red, black or blue, as he pleases. Law and custom give the dog a privileged position among domestic animals. This is sometimes to my chagrin, although I, as a gardener, do not suffer from it as much as many people who attempt to keep sheep and find the finest and fattest in the lot dead and wounded some fine morning. Now the dog has his day. Perhaps by and by he will have had his day.

HOW TO GROW LARGE ONIONS AND LARGE CROPS.

BY S. D. NEWBRO, MICH.

My plan is simple and adapted to general use, and good results may be expected by observing the following directions and suggestions:

Make plant-boxes of uniform size, say 12x20 inches and 2½ or 3 inches deep. For making them, the thin lumber which enters into the make-up of many dry-goods boxes answers very well. For good drainage, instead of a board bottom, nail on narrow strips one tenth of an inch apart. When the time comes for sowing—between the middle of July and middle of September, according to climate—fill a box with well-prepared earth. Carefully strike off surplus filling with a straight-edge so the box may just be even, level full. Press this earth down one quarter of an inch. Do this with a quarter-inch board cut to fit loosely in inside of the box and nailed to a board one half inch larger all around. Scatter one quarter of an ounce of seed of any of the approved mammoth varieties evenly over the compressed earth, or put it in drills, the drills only one inch apart. Again fill the box with earth and use the straight-edge carefully (and the knack of doing it is to move the straight-edge back and forth endways while striking forward) and then every seed will be covered just one quarter of an inch deep. Then press this last filling down one quarter of an inch to compact the earth to the seeds all alike. Now fill up the box with clean-washed sand, sifted through a meal-sieve, and use straight-edge without further pressing. The sand is a mulch, and prevents crusting of the earth and the plants from doubling up and raising the crust in broken sections.

This manner of planting places all the seed on an equal start, but at the end of their fall growth, one, two, or possibly three of the sets in every ten will be decidedly small, and quite evidently so because of feeble vital power in the seed, and they can be rejected, for there can be but little hope, if planted, that they would produce marketable onions. If thus one set in ten is poor, and we spend equal time in its cultivation with the good sets, it is as the loss of a hundred bushels on a thousand, and if two such sets, two hundred bushels.

Next, plant the box out in the open garden, down in mellow earth till the top is level with the surrounding soil. Make the earth under and around the box almost soaking wet. Then on the sand of the box sprinkle a quart of water, and afterward every evening a pint, more or less—more in dry, hot weather and less or none in cool, damp weather. It is not absolutely necessary, but it will be well for the first seven days, except when sprinkling, to keep one or two thicknesses of white cloth (old sheet) spread on the sand and held there by weights on the outside earth. With favorable weather the plants will all be up by or on the ninth day. From the eighth to the twelfth or fifteenth day, if the weather is hot, shade the young plants with a board so fixed it will turn off rain. Then, as a rule, let nature take its course, except to regulate the supply of water. Too much water promotes growth of tops instead of bottoms. Use just enough water to keep the tops in fair color, and less as the time approaches for going into winter quarters.

When the sets are ripe—tops dead or nearly so—take the boxes into a cool place under shelter where the earth will dry out, then into a cellar not warm and muggy nor freezing cold, though a moderate freeze does no hurt. If the sets are only partially ripe when freezing weather is near at hand, pursue a similar course, only first take them into the house to finish ripening. But if the sets show no sign of ripening, then preserve them in the green state, as cabbage plants from autumn-sown seed, by putting the boxes into cold-frames. In the absence of cold-

frames we may confidently do as well, if not better, by placing the boxes end to end in a shallow trench, or on top of the ground, and, in addition, may include the boxes of ripe, dry sets, putting these on top of a board that they may keep dry, and then cover the boxes of green and ripe sets with two wide boards nailed together like a V-shaped pig-trough upside down. At the ends fill and pack in earth around a tube (it may be a joint of four-inch stove-pipe) laid high and level with the inner end under the arch of the inverted trough. To serve for early winter, close the tubes and cover the structure moderately with straw and some earth, and when hard winter sets in add more straw, or straw and snow. The plants will be entirely secure against sudden freezes and thaws. Occasionally open the tubes for a few minutes for cold air to blow through. With a thermometer in hand we can reach to the inside air and get the temperature.

By such a structure for preserving green sets, no boxes need be used; simply sow the seed in long, narrow beds where the plants are to be wintered. But no test of sets can be made without boxes. Testing, however, would be no particular object to those who want to raise onions only for home consumption.

To make a good test of the sets, their roots must not be disturbed by pulling up weeds and grass. Therefore, cook the earth. For only a few boxes cook in a pot on the stove. Add no water, but keep the pot closely covered. In a few minutes the pot will be full of scalding steam, and in half an hour kill all grass and seeds, and insects and their eggs. The writer commenced this cooking a few years ago to avoid disturbance of flower seeds of slow germination, and now cooks in a pan made as for boiling sap.

That there may be no difference in the size of the sets from rich and poor streaks of earth, it must be intimately mixed by screening, and lastly, by sifting through a meal-sieve. For onion sets, select only moderately rich, mellow loam and sand as makes good corn soil. When sowing the seed, let the earth be just so moist as not to clog a meal-sieve in sifting. A box of plants will produce from eight to twelve bushels. Large growers will make boxes about 2x6 feet, with side pieces projecting at the ends six inches as handles for two men—weight of box filled, about 220 pounds.

For planting, take the sets out of the earth, first soaked till soft so as to break no rootlets. Reject the poor, and plant the good ones four inches apart in rows twelve inches apart.



M. V. Richards, Land & Immigration Agent of the Baltimore & Ohio Railroad Company, Baltimore, Maryland, will be glad to answer all inquiries concerning West Virginia, Maryland and the famous Shenandoah Valley, Virginia.
Excellent locations for farmers, manufacturers, and all lines of business.



SEED WHEAT.

Catalogue of Seed Wheat, Poultry, Poultry Supplies, Dutch Bulbs, Etc., FREE on application. Samples of 4 most popular varieties, and sample of Penna. White Rye mailed for 10cts. WM. H. GRIER, 253 N. Eighth St., Philadelphia, Pa.

SEED WHEAT

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Our farm.**FIGHTING BLACK-KNOT.**

SOME time in March last we noticed three cherry-trees that were affected with this tenacious disease. The only known remedy was immediately applied. The diseased twigs—some five or six in number—were cut off and consigned to the flames. A week later, while passing a neighbor's place, the disease was noticed on some cherry-trees by the roadside. His attention was called to the subject, and on closer examination dozens of branches were found affected. He was informed of the remedy, but made no effort to stop the pest. It is constantly spreading, as the wind carries particles of the spores to other branches and even distant trees. Lovers of fruit cannot be too careful. The mere cutting of the branches will not stop the plague, as the spores will germinate if the branch falls to the ground and then by some agency be communicated to the trees. Cut and burn if you wish to cure, even if the entire tree must be destroyed. Examine both cherry and plum trees for traces of the disease, and on its first appearance begin the treatment.

About three weeks ago an examination revealed the fact that our first treatment had not eradicated all the spores, for other branches were noticed affected. These were immediately cut and burned, and it is believed that constant vigilance will be required to save the trees, especially if all do not unite to secure its extirpation.

Since many farms in this locality are in the hands of tenants, the owners, perhaps, residing at some distance, little attention is given to the future fruit supply, and combined effort is not to be secured in fighting any such pest.

JOHN L. SHAWVER.

EXTRACTS FROM CORRESPONDENCE.

FROM VIRGINIA.—Campbell county is situated in the Piedmont, or middle division of the state. It contains an area of 336,575 $\frac{1}{4}$ acres of land, valued at \$2,319,324.61. The surface of the country is generally level. There are a few very high hills and two mountains. The soil is well adapted to the extensive cultivation of the most important products that can be raised in this latitude, such as wheat, corn, oats, rye, tobacco, sorghum, grasses, fruits and garden vegetables. Wheat yields from 15 to 30 bushels per acre and corn from 50 to 75 bushels. J. J. S.

Concord, Va.

FROM OHIO.—Our harvests have been remarkably good this year. There has been an unusually large production of strawberries, raspberries, blackberries, clover and timothy hay and wheat. Oats are injured by the rust. The potato crop is very promising. Owing to the prevalence of a drought, corn, tobacco and other midsummer crops are on the stand-still. The failure of the staples last year has reduced our surplus to almost nothing. Two failures of maize in succession would be embarrassing to the farmer and stockman, but let him remember that previous to 1492 the civilized world knew nothing of Indian corn.

Trotwood, Ohio. S. S. C.

FROM SOUTH DAKOTA.—Our crops look fairly well. More than three fourths of the plowed land in this locality is uncultivated and fast going back to a state of nature. The people moved away after getting a loan on it, and left the lenders to deal with it as they wished. I, for one, tried to do too much, and for the last two years my crops have been almost failures. The natural result followed. My 320-acre farm, often called the best, as well as the best improved farm in Hyde county, passed from my control to a wealthy man, who will establish a sheep ranch on it. We have left, a tree claim (good land and well watered), my farm implements and some of my stock. With the few others who remain here we will hereafter do all we can to help ourselves. B. N. M.

Chapelle, S. D.

FROM NEW YORK.—It has been said that a man who cannot make a living in New York state cannot make a living in any state. We have all kinds of manufactories, and farmers can raise in this part of the state all kinds of farm produce. The land is best adapted to grazing, cheese and butter making. Little Falls is one of the greatest cheese markets in the world. Every Monday, salesmen and buyers from far and near meet there. Through the old Mohawk valley runs the New York Central rail-

road with its four tracks; the West Shore with its two tracks, and the Erie canal, and they are crowded with business; but they are indebted to the West for their prosperity, as they are loaded when coming from that direction and empty when returning. Gloversville and Johnstown, which are located in Fulton county, are noted as the largest glove and mitt manufacturing cities in the United States. A. J. D.

St. Johnsville, N. Y.

FROM WEST VIRGINIA.—Doddridge county lies in the north-western part of West Virginia, and has an area of about 300 square miles and a population of 12,000 or 15,000. We have nearly 100 schools, and churches are to be seen in almost every neighborhood. We have good society of honest, industrious, quiet and intelligent people. We have steep and rugged hills which are fit for nothing but sheep pasture and the timber that is on them. We have much land, usually on the opposite side of the steep land, which may be tilled with success, and along the winding streams there are narrow bottoms which are very fertile. Among these hills are rippling streams which join to form the Middle Island creek, a stream of considerable size which flows to the Ohio. The hills are clothed with forests of oak, ash, beech, maple, hickory, chestnut, poplar and pine; but the mighty oak, the lofty pine and the noble poplar are fast disappearing, to be replaced by the apple, peach and pear. Though not a grain country, we can generally raise our own grain and some to sell. We can raise plenty of vegetables down in the bottoms. The country is best adapted to fruit growing, sheep raising and grazing. There is at present considerable oil excitement in this county. The land is nearly all leased, and test wells are being put down in many places.

Central Station, W. Va. II. H. S.

FROM FLORIDA.—N. L. C., Terceira island, Florida, sends for publication the following letter from a botanist in the employ of the government, who has been investigating the plants of southern Florida: "Mr. N. L. C.: Since my return, on looking over my book in which I registered every species of plant found at every place visited, I find that Terceira island contains sixty per cent more species of plants than any other place visited during my recent trip, and 157 per cent more than I found on Key West, the supposed paradise for botanists. With the exception of two places visited, I found more than twice the number of species on Terceira than I found anywhere else. I found species on it that I have seen nowhere else, others that I have found no farther north than the Ten Thousand islands, and a large number growing on the mainland in Manatee county that I found on none of the keys or islands except Terceira. Soil and climate that will produce such a variety of wild plants will grow vegetables; there is no disputing this fact. Other advantages are its almost entire freedom from frost, the enterprise, morality and hospitality of its people, its good transportation facilities and its lovely water front along Terceira bay. While I could not learn that the frost on the morning of the 7th of April last did any particular damage on Terceira, yet I found its frightful effects among the Ten Thousand islands. I found one garden on a key nine or ten miles from the coast completely destroyed by that frost. On another key I found one fully half killed. On another key on the Gulf the full-grown leaves of the geiger-tree were killed, though several feet above ground; and that same frost extended to Cape Sable. The above facts I shall embody in my report to the Department of Agriculture, and were they made public, so that those who are seeking homes from the chilling blasts of the frozen North could know them, I am sure it would not be long till your lovely island was thickly settled with enterprising, contented people."

J. H. S."

FROM TENNESSEE.—As many hundreds of your readers in the rigorous climate of the North would be much benefited by a change, and are looking with longing eyes toward a more genial climate, I will tell them something about what is conceded to be the best portion of the South, namely, the Sweetwater valley and adjacent country. I came from the North five years ago. Our coldest weather in winter is about 15° above zero, and our warmest in summer 95°. A cool breeze blowing nearly all the time renders that less oppressive than 85° in the North. Loudon county is traversed by Big and Little Tennessee rivers (both of which are navigable, thus giving us cheap freight south), and by numerous small streams. Along all these small streams are fertile valleys beautiful to look upon and very productive. These valleys are separated by ridges which, while not so rich, are fairly productive and make most excellent grazing land. Wheat, winter oats, corn and clover are our main farm crops, and I never saw a country where clover did better than in eastern Tennessee. Wheat yields from 10 to 50

bushels per acre; corn, 25 to 100; and hay, 1 to 3 tons. With proper care we can have pasture almost the entire year; hence, live-stock raising and dairying are very profitable. There are a great many northern people here now, and more coming all the time, and the native people are as kind and hospitable as ever lived in any country. East Tennessee was noted for her loyalty during the war, and has always stood by her record; hence, there is none of that political intolerance toward a northern person that is supposed to exist all over the South. Hundreds of people in the North suffering with throat and lung troubles, catarrh, asthma and rheumatism, could be cured by living in this climate, which is conceded to be the best and most healthful on the continent. Fruits of all sorts flourish here, and for small fruits and berries it beats all. Good farms are selling at from \$20 to \$50 per acre—about double what they were worth seven or eight years ago. Cheaper lands are to be had here and all over the South, but it is poor economy to buy them, as the good, productive farms will pay for themselves in a short time, while those very cheap lands will not. So don't come South expecting to get good farms for nothing, for it cannot be done; but taking the mild climate, low taxes, cheap labor and extra markets into account, good lands can be had at about one half what the same quality would cost in Ohio, and all the extras mentioned thrown in. East Tennessee will always have a near market in the cotton-growing country, which takes all our surplus. The farms here, as a rule, are too large and not worked up to half their capacity, and we need more northern farmers to help us bring the country out. The vast mineral wealth of eastern Tennessee is destined, in the near future, to make her the greatest manufacturing center on the continent. Now, lest I trespass, I will close by saying, stick to your position on the sub-treasury scheme and on flat money. It is generally thought that the Alliance of the South is a unit in favor of all that "wild-eat" fanaticism, but it is not so. We want some radical reforms, both state and national, but no such down-hill roads to governmental bankruptcy as the sub-treasury business would be if put into operation. So stand by your guns. I speak whereof I know in saying that vast numbers of southern Allians men are with you. E. L. G.

Pres. Farmers' Alliance and Industrial Union, Second Congressional District.

Loudon, Tenn.

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Our Fireside.

LOVE'S MEANING.

I thought it meant all glad ecstatic things,
Fond glance and touch and speech, quick blood and
brain,
And strong desire, and keen, delicious pain,
And beauty's thrill, and strange bewilderings
'Twixt hope and fear, like to the little stings
The rose-thorn gives, and then the utter gain—
Worth all my sorest striving to attain—
Of the dear bliss long-sought possession gives.

Now, with a sad, clear sight that reassures
My often sinking soul, with longing eyes
Averted from the path that still allures,
Lest, seeing that for which my sore heart sighs,
I seek my own good at the cost of yours—
I know at last that love means sacrifice.
—Carroll Perry.

"IT IS ALWAYS SO."

Across the meadow, with clover sweet,
I wandered one evening with weary feet,
For my heart was heavy with untold woe,
For everything seemed to go wrong, you know.
'Twas one of those days, whose cares and strife
Quite overshadow the good in life.

So, lone and sad, 'neath the twilight stars,
I wandered down to the pasture bars.
To the pasture bars, 'neath the hillside steep,
Where patiently waited a flock of sheep
For the happy boy, with whistle and shout,
Who was even now coming to turn them out.

"Good evening!" said he, with boyish grace,
And a smile lit up his handsome face.
He let down the bars; then we both stepped back,
And I said, "You have more white sheep than black."
"Why, yes," he replied, "and didn't you know?
More white than black; why, 'tis always so."

He soon passed on with his flock round the hill,
But down by the pasture I lingered still,
Pondering well on the words of the lad,
"More white than black," more good than bad.
More joy than sorrow, more bliss than woe;
"More white than black," and "'tis always so."

And since that hour, when troubles rife,
Gather, and threaten to shroud my life—
Or I see some soul on the downward track—
I cry, there are more white sheep than black.
And I thank my God that I learned to know
The blessed fact, it is always so.
—Good Housekeeping.

THE TRUE STORY, AND HOW MAMMY HELPED TO WRITE IT.

BY RUTH M'ENERY STUART.

I.

Twas nearly midnight, of Christmas eve on Oakland plantation. In the library of the great house a dim lamp burned, and here, in a big armchair before a wanling fire, Evelyn Brance, a fair, young girl, sat earnestly talking to a wretched, old, black woman, who squatted on the rug at her feet.

"An' yer say de plautation done sol', baby, an' we boun' ter move?"

"Yes, mammy, the old place must go."

"An' is de 'Onerble Mr. Cifified buyed it, baby? I know he an' ole master set up all endurin' las' night a-talkin' and a-figurin'."

"Yes. Mr. Jacobs has closed the mortgage, mammy, and owns the place now."

"Who tol' yer, honey? Is ole master sesso?"

"No, mammy. Father seemed so depressed that I followed Mr. Jacobs out this morning and asked him all about it, and he told me."

"He aln't talked no way sassy ter yer 'bout it, is he, baby? Aln't put on no 'bove'ish ways? Debeah permission merchams, dee puts on a heap o' bligey an' superfluousness sometimes when deesteps into the royal kingdom, an' ray deyselves in robes made fur bigger folks."

"Mr. Jacobs spoke very kindly, mammy. I think he is truly sorry."

"An' when is we gwine, baby?"

"The sooner the better. I wish the going were over."

"An' whar 'bouts is we gwine, honey?"

"We will go to the city, mammy—to New Orleans. Somethling tells me that father will never be able to attend to business again, and I am going to work—to make money."

Mammy fell backward. "W-w-w-work! Y-y-you w-w-work! Wh-wh-why, baby, what sort o' funny, cuyus way is you a-talkin', anyhow?"

"Many refined women are earning their living in the city, mammy."

"Is you a-talkin' sense, baby, er is yer des a-bluffin'? Is yer axed yo' pa ylt?"

"I don't think father is well, mammy. He says that whatever I say we will do, and I am sure it is best. We will take a cheap, littlo house, father and I—"

"Y-y-you an' yo' pa? An' wh-wh-what 'bout me, baby?" Mammy would stammer when she was excited.

"And you, mammy, of course."

"Umh! umh! umh! An' so we gwine ter trabble. An' de 'Onerble Mr. Cifified done closed de morgans on us. Ef—ef I'd o' known it dis mornin' when he was a-quizzifyln' me so sergacious, I b'lieve I'd o' upped an' sassed 'im, I des couldn't o' heltn. I lowed he was teckin' a mighty frenly intruss, axin' me do we-all's puckon-trees bear big puckons, an'—an' ef de well keep cool all summer, au—an' he ax me—he ax me—"

"What else did he ask you, mammy?"

"Souze me namlin' it ter yer, baby, but he ax

me who was buried in we's graves—he did fur a fac'. Yer reck'n dee gwine claim de graves in de morgans, baby?"

Mammy had crouched again at Evelyn's feet, and her eager, brown face was now almost against her knee.

"Yes, all the land is mortgaged, mammy."

"Don't yer reck'n he bought des natchelly scuze de graves out'n de morgans, baby, ef yer ax 'im mannerly?"

"I'm afraid not, mammy; but after awhile we may have them moved."

The old bronze clock on the mantel struck twelve.

"Des listen. De ole clock a-strikin' Chris'-mus gif' now. Come 'long, go ter bed, honey. You needs a res', but I ain't gwine sleep none, 'caze all dshers news what you been a-tellin' me, hnts gwine ter run roun' in my head all night, same as a buzz-saw."

And so they passed out, mammy to her pallet in Evelyn's room, while Evelyn stepped to her father's chamber.

Entering on tiptoe, she stood and looked upon his face. He slept as peacefully as a babe. The anxious look of care, which he had worn for years, had passed away, and the flickering fire revealed the ghost of a smile upon his placid face. In this it was that Evelyn read the truth. The crisis of effort for him was past. He might follow, but he would lead no more.

Since the beginning of the war, Colonel Bruce's history had been the oft-told tale of loss and disaster, and at the opening of each year since, there had been a flaring up of hope and expenditure, then a long summer of wavering promise, followed by an inevitable winter of disappointment.

The old colonel was, both by inheritance and the habit of many successful years, a man of great affairs, and when the crash came he was too old to change. When he bought, he bought heavily. He planted for large results. There was nothing petty about him, not even his debts. And now the end had come.

As Evelyn stood gazing upon his handsome, placid face, her eyes were blinded with tears. Falling upon her knees at his side, she engaged for a moment in silent prayer, consecrating herself in love to the life which lay before her, and, as she rose, she kissed his forehead gently, and passed to her own room.

Mammy, in spite of her own prediction of sleeplessness, was already snoring before the fire. Evelyn could not sleep yet. She felt so keenly that her own decision must be the pivot upon which their future lives must turn that all her faculties of heart and mind were alert. As she sank into a chair, her eyes fell on the portraits upon the walls. Here were the uniformed soldier brothers, young and handsome, now only a misty memory of her childhood—there, in a frame of silver daisies, a baby sister, who had died before Evelyn was born. Only a spirit sister, this, and yet tonight her heart went out with a strong yearning to this baby face in a cloud. If this little sister, but a year her senior, had lived, how lovingly the two might plan and work together! And now, above the mantel is the face of her mother, the mother so recently gone. The gentle eyes of the picture seem to shed a benediction upon her as she looks into them, and for a moment the other world and this seemed almost to touch, so real does heaven become when it takes our mothers.

At last her eyes fell upon mammy, old, faithful mammy, asleep at her feet, her very presence here an act of devotion, for, since Evelyn's mother's death, mammy had forsaken her own soft bed and come here, protesting that she was "gitt'n clair sp'iled, an' no 'count anyhow, sleepin' in a funnlture bed."

On the table, at Evelyn's side, lay several ples of MS., and as these attracted her, she turned her chair and fell to work sorting them into packages, which she laid carefully away. These papers, representing much of labor and energy, were the visible foundation upon which she hoped ultimately to build an independence.

Evelyn had always loved to scribble, but only within the last few years had the idea of writing for money come to her as a possible escape from threatened poverty. Gleaning those which seemed best of her early writings, she had revised, polished and corrected them so far as she could, and, if the whole truth must be told, she had even sent several MSS. to editors of magazines, but somehow, like birds too young to leave the nest, they all found their way back to her. With each failure, however, she had become more determined to succeed, but in the meantime—now—she must earn a living. This was impracticable here. In the city all things were possible, and to the city she would go. She would at first accept one of the tempting situations offered in the daily papers, improving her leisure by attending lectures, studying, observing, cultivating herself in every possible way, and, after a time, she would try her hand again at writing.

It was nearly day when she finally went to bed, but she was up early next morning. There was much to be considered. Many things were to be done.

At first, she consulted her father about everything, but his invariable answer, "Just as you say, daughter," transferred all responsibility to her.

A letter to her mother's old New Orleans friend, Madame Le Duc, briefly set forth the circumstances, and asked Madame's aid in

securing a small house. Other letters sent in other directions arranged various matters, and Evelyn soon found herself in the vortex of a move. She had a wise, clear head and a steady, resolute hand, and in old mammy a most efficient deputy. The woman seemed, indeed, positively ubiquitous as she busked about, forgetting nothing, packing, suggesting, and, spite of herself, frequently protesting; for, if the truth must be spoken, this move to the city was violating all the traditions of mammy's life.

"Wh-wh-wh-why, baby! Not teck de grime-stone!" she exclaimed one day, in reply to Evelyn's protest against her packing that ponderous article. "How ls we gwine sharpen de spade an' de grubblin'-hoe to work in the gyardin?"

"We sha'n't have a garden, mammy."

"No gyardin!" Mammy sat down upon the grindstone in disgust. "Wh-wh-wh-what sort o' a foreigh, no-groun' place is we gwine ter, anyhow, baby? Honey!" she continued, in a troubled voice, "co'se you know I ain't got education, an' I ain't claim knowledge; b-b-b-but ain't you better study on it good 'fo' we goes ter dshere new country? Dee tells me de cidy's a owdacious place. I been heerd a heap o' tales, but I ain't say nuttin'." Is yer done prayed over it good, baby?"

"Yes, dear. I have prayed that we should do only right. What have you heard, mammy?"

"D-d-d-de way folks talks, look like death an' terror is des a-layin' roun' loose in de cidy. Dee tell me dat ef yer des natchelly blows out yer light fur ter go ter bald dat dshere some'h'n' what stan' fur wick, hit 'ill des keep a-sizzlin' an' a-sizzin' out, des like sperityal steam; an' hit's clair pizen!"

"That is true, mammy. But, yon see, we won't blow it out. We'll know better."

"Does yer snuff it out wld snuffers, baby, er des filng it on de flo'an' tromp yer foots on it?"

"Neither, mammy. The gas comes in through pipes built into the houses, and is turned on and off with a valve, somewhat as we let water out of the refrigerator."

"Um-hm! Well done! Of co'se! On'y in place o' water what put out de light, hit's in'ardly filled wid some'h'n' what favor a blaze."

"Exactly."

Mammy reflected a moment. "Bnt de grime-stone gotter stay berhime, is she? An' is we gwine leave all de gyardin tools an' implements ter de 'Onerble Mr. Cifified?"

"No, mammy; none of the appurtenances of the homestead are mortgaged. We must sell them. We need money, you know."

"What is de impertinences o' de homstid, baby? You forgits I ain't onerstan' book words, honey."

"Those things intended for family use, mammy. There are the carriage horses, the cows, the chickens—".

"Bless goodness fo' dat! An' who gwine drive 'em inter de cidy for us, honey?"

"Oh, mammy, we must sell them all."

Mammy was almost crying. "An' what sort o' entry is we gwine meck inter de cidy, honey—empty-handed, same es po' whte trash? D-d-d-don' yer reck'n we b-b-better teck de chickens, baby? Yo' ma thunk a heap o' dem Brahma hens an' dem Clymoth Rockers—dee look so courageous."

It was hard for Evelyn to refuse. Mammy loved everything on the old place.

"Let us give up all these things now, mammy, and after awhile, when I grow rich and famous, I'll buy you all the chickens you want."

At last preparations were over. They were to start to-morrow. Mammy had just returned from a last tour through outbuildings and gardens, and was evidently disturbed.

"Honey," she began, throwlug herself on the step at Evelyn's feet, "what yer reck'n? Ole Muffy is a-sett'n on fo'teen aigs, down in de cotton-seed. W-w-we can't g'way i'm heah an' leave Muffy a-sett'n; hit des natchelly can't be did. D-d-d-don' yer reck'n dee'd hol' back de morgans a little, tell Muffy git done sett'n'?"

It was the same old story. Mammy would never be ready to go.

"But our tickets are bought, mammy."

"An' like as not de 'Onerble Mr. Cifified'll shoo old Muffy orf de nees' an' spille de whole sett'n'. Tut, tut, tut!" And groaning in spirit, mammy walked off.

Evelyn had feared, for her father, the actual moment of leaving, and was much relieved when, with his now habitual tranquillity, he smilingly assisted both her and mammy into the sleeper. Instead of entering himself, however, he hesitated.

"Isn't your mother coming, daughter?" he asked, looking backward. "Or—oh, I forgot," he added, quickly. "She has gone on before, hasn't she?"

"Yes, dear, she has gone before," Evelyn answered, hardly knowing what she said, the chill of a new terror upon her.

What did this mean? Was it possible that she had read but half the truth? Was her father's mind not only enfeebled but going?

Mammy had not heard the question, and so Evelyn bore her anxiety alone, and during the day her anxious eyes were often upon her father's face; but he only smiled and kept silent.

They had been traveling all day, when suddenly, above the rumbling of the train, a weak, bird-like chirp was heard, faint but distinct; and presently it came again, a prolonged "p-e-e-p."

Heads went up, inquiring faces peered up and down the coach, and fell again to paper or book, when the cry came a third time, and again.

Mammy's face was a study. "Sh—sh—sh! Don't say nuttin', baby," she whispered in Evelyn's ear; "but dis here chicken in my bosom is a-ticklin' me so I can't hardly set still."

Evelyn was absolutely speechless with surprise, as mammy continued by snatches her whispered explanation:

"Des 'fo' we lef', I went 'n' lif' up ole Muffy ter see how de aigs comin' orn, an' dshire alg was pipped out, an' de little risdenter look like he eyed me so berseechin' I des natchelly couldn't leave 'im. Look like he knew he warn't righteously in de morgans, an' e crave to clair out and trabble. I did hope speech wouldn't come ter 'im tell we got off'n dese hcah train kyars."

A halt at a station brought a momentary silence, and right here arose again, clear and shrill, the chicken's cry.

Mammy was equal to the emergency. After glancing inquiringly up and down the coach, she exclaimed aloud: "Some'h'n' in dshire kyar sonn' des like a ventriloquer."

"That's just what it is," said an old gentleman opposite, peering around over his spectacles. "And whoever you are, sir, you've been amsing yourself for an hour."

Mammy's ruse had succeeded, and during the rest of the journey, although the chicken developed duly as to vocal powers, the only question asked by the curious was, "Who can the ventriloquist be?"

Evelyn could hardly maintain control of herself, the situation was so utterly absurd.

"I does hope hit's a pullet," mammy confided, later; "but I doubts hit. Hit done struck out wid mannish movement a'ready. Muffy's aigs allus hatches out sech invigorous chickens. I gwine in de dressin'-room, baby, an' wrop 'im up ag'in. Feel like he done kicked 'isself loose."

Though she made several trips to the dressing-room in the interest of her hatchling, mammy's serene face held no betrayal of the disturbing secret of her bosom.

At last the journey was over. The train crept with a tired motion into the noisy depot. Then came a rattling ride over cobblestones, granite and unpaved streets; a sudden halt before a low-browed cottage; a smiling old lady stepping out to meet them; a slam of the front door—they were at home in New Orleans.

Madame Le Duc seemed to have forgotten nothing that their comfort required, and in many ways that the creole gentlewoman understands so well, she was affectionately and unobtrusively kind. And yet, in the life Evelyn was seeking to enter, Madame could give her no aid. About all these new ideas of women—ladies—going out as bread-winners Madame knew nothing. For twenty years she had gone only to the cathedral, the French market, the cemetery and the chapel of St. Roche. As to all this unconventional American city above Canal street, it was there and spreading (like the measles and other evils); everybody said so; even her paper, *L'Abbeille</*

Our Household.

ROXANNA DARNING SOCKS.

I like to watch her sitting there,
The lamplight on her jetty hair.
Her eyes down bent upon the socks,
The while she slowly, slowly rocks.
The wooden chair seems quite a throne,
The queen upon it all my own.
And wife Roxanna is so sweet,
In plain home dress that's always neat.
Her slippers peep out just below
On feet that sure forgot to grow.
Her hands are dimpled, warm and white,
And always busy still at night.
Sometimes they steal about my face
In all their fair and tender grace.
And when I feel upon my brow
Their touch, I in quick homage bow.
We've just been wed a year or two,
And still we are two lovers true.
She is so gentle, good and kind,
And to my faults so strangely blind.
I like to watch her darning socks
As slow the old farm clock tick-tocks.
For she's a picture sitting there,
The lamplight on her jetty hair.

HOME TOPICS.

CLOSETS.—One of the most important things that tend to make the comfort of the household, is plenty of closets, but while they are such a convenience they are also a care to keep them tidy. If possible, every closet should have some mode of ventilation. Soiled clothing ought never to be put in a bedroom closet, and if there is no other way to ventilate it, leave the door open at night. I remember of sleeping in a room one night where a disagreeable odor disturbed me all night. In the morning I found a pair of old shoes, covered with a blue mold, in the closet. Servants, as a rule, are careless of the kitchen closets, if the housewife does not give them her personal supervision. They should be thoroughly cleaned at least once a month. After the shelves have been scrubbed, and before clean papers are put on, sprinkle them well with powdered borax and you will not be troubled with roaches. The refrigerator, or ice-chest, too, needs careful attention, or it will soon become slimy and full of foul odors. It should be wiped out every day, and at least once a week be washed with hot water and soda, rinsed well and left to air a little while before the ice is put in.

Never allow things to accumulate in closets which are not worth saving. Cremation is the best cure for many overstocked closets. Old shoes and clothing, which has been cast aside by your own family, give to some one who needs it, if it is still fit for use; if not, the sooner the ragman has it the better.

APLES.—Of all fruits the apple is in the first rank. It is grown in a wide range of climate, is nutritious, healthful and generally liked. For breakfast, as a first course, nothing is better than stewed or baked apples, and there is an almost infinite variety of ways in which they may be prepared for dessert, some of which I do not think, are in general use.

APPEL MERINOUE.—Pare and core, without breaking, a dozen small apples. Set them in a pudding-dish in which they may be served, and fill each one with sugar, lay a bit of butter on top and a pinch of cinnamon. Turn a pie-tin over the top and set them in the oven to bake until they are tender, but not broken. Beat the whites of three eggs to a stiff froth, add two tablespoonfuls of powdered sugar, put it over the apples and set the dish back in the oven until it begins to color a faint yellow. Serve this either hot or cold; but if it is to be served cold it is better to let the apples cool before the meringue is put on.

APPEL FLOAT.—Pare, cut in quarters, and core some tart, quick-cooking apples and steam them until tender. Beat them fine, sweeten to taste, and then stir in the beaten whites of four eggs. Serve cold. Serve cream with both apple meringue and apple float, although they are nice without if you do not happen to have the cream.

EDEN PUDDING.—Steam twelve small apples, pared and cored, until they are

tender, but not broken. Let them cool, then put them into a buttered pudding-dish, fill the core openings with any kind of red jelly or jam, and cover with a piece of steamed apple. Make a boiled custard of one pint of rich milk, yolks of four eggs, one teaspoonful of corn-starch and a half teacupful of sugar. Remove the custard from the fire, stir in the well-beaten whites of two eggs, pour this over the apples and let the pudding bake for half an hour. Beat the whites of the other two eggs to a stiff froth, add a tablespoonful of powdered sugar, spread it over the top of the pudding and set in the oven until it begins to color. **Maida McL.**

MORE WOODWORK FOR THE BOYS.

BY KATE KAUFFMAN.

No. 1.

It has been my good fortune to hear that the boys really do care for these articles on wood carving. Do you know, that did me good. It was encouraging. I have never been a person to write to authors of any kind to tell them how much pleasure their works give me, but I begin to think that it would have been better if I had expressed myself. There are several living story writers whose novels have made me many a happy hour. I like them, I admire their writings, I am grateful for the joys I have had over their pages; but they don't know it. There is America's greatest poet, Walt Whitman, now an old man and confined

to cut out a paper pattern. The piece of wood against the wall must, of course, be just the same width as the front, but it must extend straight upward, several inches higher, and then have the top point in addition. Besides your two pieces of wood you need a pair of hinges, two short brass chains, and, behold, a wall-pocket.

The decorations of this piece are all in relief. Now, I can't remember whether I have described this process to you or not. I am sure I wrote some very plain descriptions of how to do relief carving, which will be in the LADIES HOME COMPANION. If you do not get that paper, you ought to subscribe for it immediately. Begin with the July papers, and I am sure you will get the articles to which I refer. However, if relief carving has not been treated in the papers for the boys, they shall have plain direction on that subject hereafter.

Let us talk about the center of the lower part of the pocket. By the way, when you have this piece cut out, have the edge beveled. After that allow a plain band or rim half an inch all around. Now draw a circle, proportioning it as you see in the illustration. You observe that the initials are on a shield. Draw this shield and the letters on a piece of paper. Proportion its size to the circle. You can transfer it to your wood. I suppose you know how to do that. Get a sheet of carbon paper, lay it on the wood; put your paper having

July 1st, will not be troubled with this design. Hold the picture of it off from the eye so as to get the "effect," as we artists say. You will see that it is made with the chisel altogether, and you know that the dark shading in the picture means the deep cutting in the woodwork.

Really, the hardest part of this will be to get your design drawn on the wood. It must be precisely right. After it is drawn the cutting will be easy. Try a little of it on a piece of waste wood. I spoke of continuous lines across the design. I notice that diagonally they cross also. The general effect is of a collection of stars. Each star is composed of six diamonds, and each diamond has two triangular sides sloping downwards.

THE WORK OF TIME.

Well, after thirty-four years of married life, my husband and self are alone in the house—for we were never alone in those sweet, early days that can come but once to any of us. My husband's grandparents lived with us, and the little ones came soon and fast. The grandparents have long since gone the way of all flesh, and the next generation, the parents, are all laid away but one, an old, feeble woman, who is patiently waiting her call. And now, the last child has left us to build a home for himself; all mated but one, and that one our baby. His business confines him closely twenty miles away, and we see his pleasant face and hear his merry laugh but seldom. And yet we have nothing to complain of; they are all doing well, a family that their father and mother, at all events, are proud of. And they have all loving kindness and remembrance for the old folks at home. But oh, the house, albeit it does not cover much ground, is so large, and that table in the dining-room is so long, and I remember so many times when it was not long enough. And we don't like to change it for the little round one, for the children and friends often drop in just at meal time, and we would not for the world have them think there was not room, and so we sit on each side of the center, and make talk and try to be cheerful. And such is the adaptability of the human mind that we shall grow accustomed to it, and, I hope, enjoy a pleasant autumn of life as we totter down life's hill, hand in hand, until we sleep together at its foot, and make room for the next generation to follow in our footsteps, knowing that the Father cares for the work of his hands, in all their times and seasons, and that all will be well.

CARE OF FOOT-WEAR.

And the principle that "All's well that ends well" the appearance of a woman's foot is of supreme importance, says Helen Jay. Treat your shoes tenderly. Have one pair sacred to rainy weather, for rubbers ruin fine leather.

Avoid varnish and blacking of all kinds and substitute vaseline. First rub your shoes with a piece of old, black silk; then apply the vaseline with a soft, black kid glove.

If you insist on your dressmaker facing your gowns with velvet or velveteen instead of braid, you will lessen your shoemaker's bills, and be saved from the purple blemish on the instep, caused by the movements of the skirts in walking.

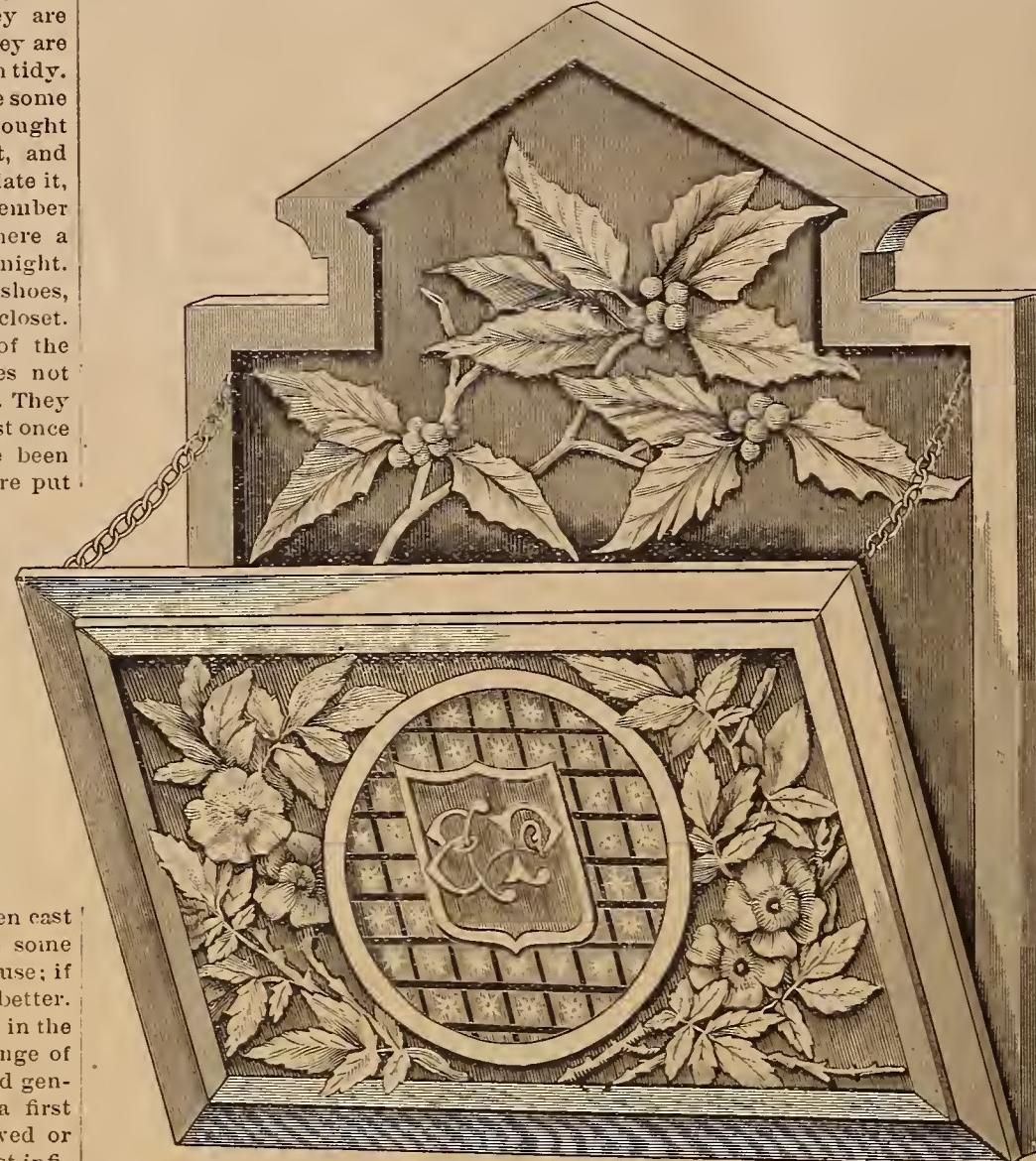
When buttons come off don't hunt up old shoes and use the shabby buttons, but invest five cents in a card of shining black beauties and have them ready for emergencies. One old button spoils the style of a shoe.

Gaiters are charitable things and cover a multitude of defects. Half-worn boots will last a long time under their kindly protection.

To save your evening shoes and slippers, invest in a pair of white fleece-lined Arctic boots, which will cost \$2, but save ten times that amount in carriage hire and medicine, not to mention the shoes themselves.

After removing your shoes put them in correct position by pulling up the uppers and lapping the flap over and fastening one or two buttons. Then pinch the instep down to the toe, bringing the fullness up instead of allowing it to sag down into the slovenly breadth of half-worn footgear.

A boot that is kicked off and left to lie where it falls, or is thrown into the closet, will soon lose shape and gloss.



WALL-POCKET.

to his room by illness. I think he is a wonderful person, he has expressed so many fine thoughts for me; yet I have not told him of it. One reason that I have never written to these persons is because I said to myself: "They are busy; they will not care for my little word of thanks or praise." But from my knowledge of my own heart—and that is a good way to judge of all hearts—a word of thanks and praise comes acceptably to every worker. Some day I shall take time to write a half dozen letters to my half dozen favorite living authors.

But Mr. Benn Pitman I thank and praise by directing your attention to his numerous good ideas concerning wood carving. His designs and directions inspired me in my work, and I know they will be acceptable to you also.

Here is a wall-pocket. Such an object is needed in every home, and if you can have one like this illustration, you will have beauty and durability combined. You can easily tell from the picture that it consists of two pieces of wood. Half-inch walnut or cherry will be best. The front is a rectangle of any size you wish. Do not make it too large. Your best plan

is the design, on top of the carbon paper, and trace your design by going over it with a sharp lead-pencil, on which you must press with sufficient force to leave the design on the wood, having received the impression from the carbon.

The circle between its plain outer rim and the shield in the center is filled with an all-over or diaper pattern. I give you a specimen design for this kind of work. It is not like the one on the pocket, but I will give you several in the course of your lessons. You should take a piece of paper the size of your circle, and draw your design on it with pencil; then transfer, leaving, of course, the shield. It will take some skill to draw this design. Of course, you could transfer it from this paper, but if you are a very quick-witted boy, you can draw it for yourself, making the diamonds and triangles which compose it larger or smaller, just as you wish.

You will notice that in one direction, from X to X, there are straight lines. Crossing these there are broken lines, but none which extend entirely across the surface. It seems to me that any one who learned to do the dog-tooth and other designs, in the FARM AND FIRESIDE for

TO TELL A GOOD HOUSEKEEPER.

How can I tell her?
By her cellar.
Clealy shelves and whiteued walls,
I can guess her
By her dresser;
By the back staircase and hall;
And with pleasure
Take her measure
By the way she keeps her brooms;
Or the peeping
At the "keeping"
Of her back and *unseen* rooms.
By her kitchen's air of neatness,
And its general completeness
Where in cleanliness and sweetness
The rose of order blooms.

SCRAPS.

MARION WASHBURN.

There are scraps somewhere besides in the kithen and pantry.

Seraps of lovely wall-papers, seraps of silk and muslin and woolen. Pioces of partly-worn garments, and seraps of new cloth folded away for some good use, perhaps, in seven years. House cleaning time always leaves great rolls, which somebody wishes were out of the way, but never finds use for. Take a week and try to see how much can be evolved from scraps in that time.

Tear all pieces of worn garments, bright strips and fancy calicoes, about one inch wide, and sew like carpet rags. Take three strands and braid together. With heavy thread sew these braided strands around to make a circular mat, or around one half a yard of Brussels carpeting, to make a long rug. This may be very handsome if the strip of carpeting is bright, and the braids contain considerable red and black. It should be rather dark, so as not to soil easily.

New pieces of gingham and calico may be sewed on large, thin linings in crazy-work style, and make the covering for splendid comforts. This may be done on the sewing-machine, and finished in a short time. I have found this a good way to use the odd pieces which accumulate so quickly in a large family.

Perhaps you have a chair needing a cushion, very badly. Take all these woolen pieces, black and colored, and piece them up in log-cabin style. One block makes the cushion. Cover a cord with red, and sew in the edges of the cushion. The bottom may be cotton flannel, red or brown.

If there is a small bedroom or closet which looks rough overhead, make a thick paste with flour and glue, and use up all the seraps of wall-paper and bordering upon it. It may look crazy enough, but it will be clean, and not so horrid as one might think.

Small pieces of silks and pluses make lovely, round pincushions and sachet-bags, without which, just now, no room is complete.

Suppose you have a yard of serim, an empty shoe-box, a little brass wire, a few rings, seraps of table oil-cloth, etc. What to do with the truck? That is the question. Why, you have been wanting a plac for those scattered books for some time. Stand the shoe-box on end, nail in two cleats on each side, place two thin boards on these cleats and fasten. Stain or paint the whole thing black. Pink the edges of oil-cloth, and tack on the shelves. Fasten the wire across the top edge and hang the serim with the rings upon it. Lay a scarf of felt or China silk over the top. Now you can fill with books, arrange some bric-a-brac on top, and behold! a great addition to a vacant corner and something useful besides. Perhaps there may be a piece of denim, or cotton flannel, or madras just waiting for some such use.

In one place you have a dingy carpet lounge. What will you do with that? You haven't five dollars to have it recovered? Well, I should say not. Get three yards of double-faced cotton flannel, in a rich crimson pattern. It will be about thirty cents a yard. Remove the gimp and tacks, and smoothly cover the old carpeting all up. If good enough, tack the gimp back in place; if not, buy new. Varnish the woodwork and throw a tidy across the head. Everybody will wonder where you got such a lovely new velvet sofa, for a time, and then, of course, it will wear up a little rough, but brush the nap the right way, and it will pay for covering.

The scraps left? Oh, yes, cut them into half moons. Sew two together and stuff with cotton. They make nice little head

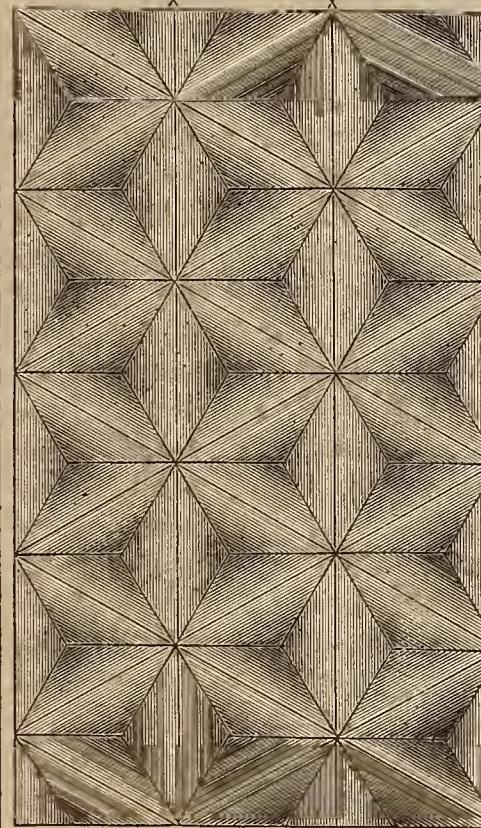
rests, tied onto rocking-chairs with narrow ribbon.

In the sewing-room there will be pieces of washable goods left, not even large enough for baby's short dress. Well, make a yoko and sleeves of this pretty light, and add a skirt and ruffled strap around the sleeves, of any contrasting shade. It will look almost as if it were done on purpose. The style of odd sleeves is a splendid one for all of us who must make the most of every cent. The black basque in which the sleeves are threadbare, will be chic with new velvet sleeves and collar, and, perhaps, a piece arranged over the front. Why, sometimes it is really enjoyable to see how well we can make a thing look at small expense. There is a yard of inch-wide black satin ribbon. Ten minutes will make one of the stylish new necklaces. Paint a row of yellow-eyed daisies along the center and leave the ends plain. Tie in the back with a bow. It goes nicely with a black dress.

Cut those seraps of pasteboard into palettes or plaques. Cover with velvet, plush, or any dark material, and use as a background for thistle or milkweed pompons. A photograph may be placed in the center if desired. I have said nothing of the cute little toques which may be fashioned from the scrap-bag of any family, but a skillful hand will not need my suggestions.

THE TOILET.

Everybody cannot have a rose-lily complexion, but everybody can have a soft, agreeable skin. First, women who want a nice skin ought not to eat quantities of heavy, rich food. A diet of fruit, fresh



ALL-OVER DESIGN FOR WOOD CARVING.

milk, unbolted flour bread, grains and vegetables will do more for the complexion than a hundred washes. Avoid lard dishes, spices, tea, coffee and alcohol. Long drinking of tea, coffee and constipating food give women cloudy skins and red noses. A torpid liver causes constipation, and that ruins the skin. Dyspepsia and tight lacing redden the nose.

Take a bath every day in tepid water, with a moderate use of soap. Cold water in winter roughens the skin and makes it bark-like. Wash your face and neck in hot water at night, just before you go to bed; use soap at this time, but rinse it off thoroughly. In the morning, when you rise, is the best time for your bath, but don't wash your face with soap then.

Women can keep off pimples and sal-low spots by the frequent bath and eating only plain, simple food. Milk, fruit and grains are the best. Even wrinkles can be kept at bay a long time. This is done by keeping good-natured and serene, and by the use of some softening lotion upon the face every night. Pure glycerine, thinned with water, is excellent. Rub it thoroughly upon the face, neck and hands just before going to bed. It will, to a great extent, smooth out the grim wrinkles, and even soften the whole expression of the face. Oatmeal-water is also an excellent lotion. Soak a cupful of oatmeal in five cupfuls of water for twenty-four hours. Stir it several times. Strain through a sieve and add bay-rum

till it is of the thickness of cream. Batho the face and hands at night with this, letting it dry in.

Bathing the face daily in rain-water is also an excellent way to improve the skin. It softens and whitens it, and acts as a tonic upon all the tissues.

It is the duty of every woman, no matter how old, to make herself as pretty as possible. One of her chief beauties is a good complexion, but it should not be obtained through artificial means. Powders, if used at all, should be used very sparingly. They look better in the evening than in the daylight. Lead powders are rank poison. They may be known by the slightly purple, livid cast they give the face when put on heavily. Young girls should never use powder at all. It only dims their bright color; use corn-starch to remove the shine.

WAX-PLANT.

To MRS. K., Maryland.—In regard to your wax-plant let me say, don't cast it out. Keep it in a warm room, and don't water very often; when you do, take hot water and be careful not to get it on the leaves. Have patience and you will have a nice plant. Don't set it outdoors summer or winter. I have one that is twelve years old, and it blooms from April till late in the fall; it has from thirty to fifty buds at one time. I have started more than twenty-five plants from a leaf, with splendid results.

MRS. C. H. G.

ABOUT YOUR BOYS.

Treat your boys as though they were of some importance, if you would have them manly and self-reliant.

Be careful of the little courtesies. You cannot expect your boy to be respectful, thoughtful and kind unless you first set him the example.

If you would have your boy make you his confidant, take an active interest in all he does, don't be too critical, and ask for his views and opinions at all times.

Don't keep your boys in ignorance of things they should know. It is not the wholesome truth, but the unwholesome way in which it is acquired that ruins many a young man.

Don't act as if you thought your boy amounts to nothing, nor be continually making comparisons between him and some neighbor's son to his disadvantage; nothing will dishearten him quicker.

Don't think that anything is good enough for the boys and that they don't care for nice things; have their room fixed up as nicely as possible; let them understand it is to be kept in order, and the result will justify your pains.

Furnish your boy with good, wholesome reading matter. Have him read to and with you. Discuss with him what you read and draw out his opinions and thoughts upon the subject. Help him to think early for himself.

Make home a pleasant place; see to it that the boys don't have to go somewhere else to secure proper freedom and congenial companionship. Take time and pains to make them feel comfortable and contented, and they will not want to spend their evenings away from home.

Pick your son's associates. See to it that he has no friends you know not about. Take an interest in all his troubles and pleasures, and have him feel perfectly free to invite his friends to the house. Take a little pains to make him and his friends comfortable and happy. He will not be slow to appreciate it.

RECIPES.

TOMATO CATSUP.—

Tomatoes,	1 gallon;
Salt,	6 tablespoonfuls;
Black pepper, 3	"
Cloves,	1 "
Cinnamon,	2 "
Allspice,	2 "
Vinegar,	1½ pints.

One peck of tomatoes will make one gallon of catsup, strained.

MAPLE BEER.—To four gallons of boiling water put one quart of maple sirup and one tablespoonful of essence of spruce; when about milk-warm add one pint of yeast. When fermented bottle it. In three days it will be fit for use.

KOUMISS.—This is a standard beverage of the Tartars, who almost live upon it during the summer, and it would make a pleasant drink for farmers to use during harvesting. Soak a cupful of oatmeal in five cupfuls of water for twenty-four hours. Stir it several times. Strain through a sieve and add bay-rum

milk and four lumps of white sugar. Mix well and see that the sugar dissolves. Put in a warm place to stand ten hours, when it will be thick. Pour from one vessel to another until it becomes smooth and uniform in consistency. Bottle and keep in a warm place twenty-four hours. Shake well five minutes before opening.

PICKLED PEACHES.—Take ripe but not too soft peaches, pit a clove in each one. Take two pounds of brown sugar and one gallon of vinegar, boil up twice and skim; pour while hot over the peaches and cover tight. In a week or two pour off and seal again, after which they will keep nicely.

GRAPE WINE.—Put the grapes over the fire until the juice can be removed by gentle pressure, then strain and add one pound of sugar to one gallon of juice; return to the stove and let boil twenty-five minutes, skimming well all the time. Pour into Mason jars and seal air-tight while hot; or if in bottles, use new corks, wired on and dipped into sealing-wax.

CHRISTIE IRVING.

Read adv. of B. & O.R.R. on page 384, this paper.

A rising young artist in water-colors is Miss Maud Humphrey, whose work has won her the title of the Kate Greenaway of this country. She began her artistic life poor, and comparatively unknown, and the public recognition of her work was entirely due to its merit.

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LADIES CAN CAN

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ANY PERSON can have this paper one year free by sending us one NEW yearly subscriber at the regular price, 50 cents a year for the paper alone.

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We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Our Sunday Afternoon.

TIME SHALL BE NO LONGER.

C. P. DAVENPORT.

x the sea and on the land
A mighty angel soon will stand,
Stand and by Jehovah swear
Time shall be no more.

The last trumpet's awful sound
Then will echo round and round,
Call the sleepers under ground,
To the judgment seat.

Quick and dead will then appear;
Men and demons range before
That tremendous judgment seat,
There their doom to learn.

Of men a congregation vast,
Stand to hear their sentence passed.
Each, according to their works,
Reap a just reward.

Then the Judge will to them say,
Depart, ye cursed, far away,
My gospel ye would not obey,
Nor none of my reproof.

Down to ruin ye shall go,
Death eternal waits for you;
For your duty ye did know,
And ye did it not.

Come, ye blessed of the Lord,
Eternal life is your reward,
Enter now that blessed abode,
Long prepared for you.

AN AGE OF UNREST.

LHE closing decade of the nineteenth century witnesses a deep and wide-spread spirit of dissatisfaction and unrest. And this, notwithstanding the fact that the past hundred years have seen a greater advance in all that relates to a material progress than any similar period of the world's history. It is no exaggeration, even, to say that the growth of discontent and restlessness has kept pace with the growth of physical power, wealth and comfort, and with advancement on lines of political and intellectual progress. The world has been growing richer, inventions have multiplied, trade has found new channels, governments have been liberalized, luxury has increased; and all the time men have been growing more discontented; ominous signs of social and national disturbance were never more thick and threatening.

This has been very strongly put by Prof. Bryce, the historian, in a late address in Brooklyn. He said in substance, thirty or forty years ago men thought they saw before them a promised land of satisfaction and happiness. But now when constitutional principles are recognized; when political freedom in thought and speech has been obtained; when trade and the power of making money have had an enormous development; when physical science has added a thousand comforts to life; and when nations have become pure democracies, there is instead of repose, universal melancholy, discontent and despondency. The world does not grow better, the manners of the upper classes are not nobler, nor are the masses more contented.

This is significant and solemn teaching; and it is teaching that comes not from a dreamer or fanatic, but from a clear-headed and practical observer of human affairs, from one of the foremost publicists of our day. The witness is true. And it shows how needful it is to turn for instruction, hope and comfort, in these times, to the prophetic Word. This part of the Holy Scripture is certainly not quoted or enforced commonly in the pulpit as it should be. If this is an age of growing discontent, it only serves to confirm the teaching of prophecy, which at the same time furnishes the truest comfort to hearts that are weary. The greater the uneasiness and unhappiness of the times, the greater the need of the strength and encouragement which the "sure word of prophecy" gives, and which it was intended to give, as "a light that shineth in a dark place, until the day dawn and the day-star arise in our heart."—D. F. L., in Christian Secretary.

SINCERITY.

The word "sincere" is said to be made up of two Latin words, meaning "without wax," and originally referred to pure honey. Hence, to be sincere is to be pure, unmixed, unadulterated. In other words, it is to be honest. Paul wrote to the Philippians that he prayed that they might be

sincere; that is, that they might be honest. Doubtless this would not have sole reference to business transactions. It had a much broader scope. It comprehended the whole range of moral conduct and Christian relation and obligation. Paul desired that the Phillipians should be sincere in their love, in their professions of attachment to Christ, in their loyalty to the gospel, in their fidelity to the brethren, in their attentions to the weak and afflicted, in their benevolence and in their prayers. He knew that they might be sincere in their business relations and yet fail to be sincere in their spiritual exercises—in their prayers, in their love towards God and their brethren, and in their relation to various Christian enterprises.

Christian honesty is not confined to business matters. It extends to and through every conceivable relation which one holds to God and man, in the church and out of it, in private and in public, at home and abroad. It has been charged that even Christian men, although honest in their domestic and neighborly relations, are dishonest in political affairs; or, to put it differently, they are said to be honest in their private life, but dishonest in their public life. We doubt this. If a man, no matter what he professes, be insincere in public capacity, or in official relations, he is also insincere in his private and unofficial relations. No one is divided in his real character. His insincerity may be more manifest in one sphere of activity than it is in another, but his insincerity runs through his whole character, whether it is always equally discerned or not. If one be insincere in his love for his brethren, he is insincere in his prayers to God; and if one pray in public differently from what he means or desires, but simply to suit his listeners, he is insincere, he is dishonest.—*Zion's Herald*.

"THAT'S MY BOY."

Once I remember standing by the surging billows on one weary day and watching for hours a father struggling beyond in the breakers for the life of his son. They came slowly toward the breakers on a piece of wreck, and as they came the waves turned over the piece of float, and they were lost. Presently we saw the father come to the surface and clamber along to the wreck, and then we saw him plunge into the waves, and thought he was gone; but in a moment he came back again holding the boy. Presently they struck another wave, and over they went; and again they repeated the process. Again they went over and again he rescued his son.

By-and-by as they swung near the shore they caught a snag just out beyond where we could reach them, and for a time the waves went over them there till we saw the boy in his father's arms, hanging down in helplessness, and knew they must be saved soon or be lost; and I shall never forget the gaze of that father. And as we drew him from the devouring waves, still clinging to his son, he said: "That's my boy! That's my boy!" And so I have thought in the hours of darkness, when the billows roll over me, the great Father is reaching down to me, and taking hold of me crying: "That's my boy!" and I know I'm safe.

TO-DAY'S DUTY.

"It will not last long. Your day, my day, the world's day, the day of opportunity, the day of grace, the day of salvation—all days are swiftly passing away; and the great day, the last day, will surely and speedily come." So speaks a wise man. He speaks well. Time is short. Our waking hours are soon over. The cradle and death chair of Frederick the Great in the Hohenzollern museum are placed side by side. With all of us they stand near together. The time allotted us to do our work for God will soon have emptied itself into the ocean of eternity. We must seize the present opportunities. Their neglect can never be repaired. We have our work to do. We have a daily work. It is more important than we know. Let us be up and doing. Remember what Jesus said: "I must do the work of him who sent me while it is day; for behold, the night cometh, when no man can work." Only one conscious of this necessity will be able to say, when the sun is settling, "I have glorified thee on the earth. I have finished the work which thou gavest me to do."—Epworth Herald.

Read adv. of B. & O. R. on page 334, this paper.

We offer \$1,000 FOR FAILURE OR THE SLIGHTEST INJURY.

We Sell Direct to Families

AND MAKE IT EASY FOR YOU TO BUY OF US NO MATTER WHERE YOU LIVE.



Yes, my dear, my Marchal & Smith Piano is a beautiful instrument. The tone is so sweet and pure, the action so fairy-like, and the finish so elegant that not another thing can I wish for. I wrote to the factory, and told them just what I wanted, and they selected it and sent it to me for trial, agreeing to take it back and pay all the freights if I did not like it. But I could not be better suited if I had a thousand to choose from. My dear, when you want a Piano or an Organ send for their catalogue.

PIANOS | ORGANS

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Winchester's Hypophosphite

OF LIME AND SODA,
as a tonic for Invalids recovering from Fevers
or any other illness is unequalled, speedily re-
storing and permanently increasing the vital
strength and nervous energy.SOLD BY DRUGISTS.
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MY WIFE SAYS SHE CANNOT SEE HOW YOU DO IT FOR THE MONEY.

\$12 buys a \$65.00 Improved Oxford Singer

Sewing Machine; perfect working

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years. Buy direct from our factory, and save dealers

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Genuine Dueber, solid silvering, full engraved

watch, guaranteed to wear and keep its color

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is perfect, and can not be duplicated elsewhere

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our price. The movement is our own special plate ruby

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We sell each watch a limited amount of time, and then

the privilege to return it any time within one year if it does

not give perfect satisfaction.

Cut this out and send it with

your order, and we will ship the watch to you by express C.

O. D. If you examination at the

express office, you find it as

good as you paid for, the express

agent will charge you \$5.00 or 4

for \$21.00, we pay the express

and it is yours, otherwise, you pay

nothing and it will be returned at our expense.

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Mention this paper when you write.

A Prize Rebus.
\$100.00 One Hundred Dollars Cash
FIFTY DOLLARS CASH.

5 very handsome solid gold, reliable, stem wind and stem set watches, 10 fifty dollar high-arm sewing machines, 10 twenty-five dollar silk dress patterns, 25 very handsome solid silver stem wind and stem set watches for correct guesses.



The above Rebus names a common vegetable used for food by every family every day. What is it?

To the first person who sends the correct answer to the above rebus before Monday, November 30th, 1891, we will give

One Hundred Dollars Cash.

To the second FIFTY DOLLARS IN CASH. To each of the next 5 A SOLID GOLD WATCH (not plated hnt Solid Gold). To each of the next ten A \$50 SEWING MACHINE. To each of the next ten A HAND-SOME SILK DRESS PATTERN of 14 to 18 YARDS. You can choose between black, gray, blue, green, brown or wine color, and we will send the color of your choice. To the next twenty-five we will give to each one a handsome GENUINE SOLID SILVER CASED WATCH stem wind and set. We send these premiums the same day your guess is received, all express charges prepaid, to the limit of this offer.

With your answer to the rebus we require you to send thirty cents, and we will mail you our 16-page 64 column paper "The American Household Journal" regularly for six months. The December issues of all our publications will announce the result of this offer, and the name and full address of every prize winner will be printed.

This offer is made solely to advertise our publications and introduce them into new homes. We are well able and shall promptly give all the prizes offered here—square dealing is our motto. Postage stamps taken—we use them. Give your full name and P. O. address. Our address:

The American Household Journal,
216 Washington St., Jersey City, N. J.

When you write mention this paper.

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sore eyes use Dr. Thompson's Eye-Water



FOR LADIES' AND CHILDREN'S BOOTS AND SHOES.

Awarded highest honors at
Philadelphia 1876 | Melbourne 1880
Berlin 1877 | Frankfort 1881
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And wherever else exhibited.

FOR YOU

MR. PARMELEE sold in

three days, 116 Copper

Coins for \$6,915.20 Silver

Coins for \$4,713; 4 Gold

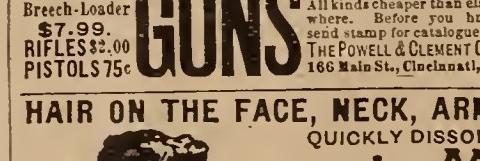
Coins for \$1,760. And we

others have done nearly as well.

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If you have any Old Coins or proofs coined before 1875, save them, as they may be worth a fortune. Illustrated circulars on rare coins free at office or mailed for two stamps.

Numismatic Bank, Boston, Mass.



GUNS

WATCHES, BICYCLES.

All kinds cheaper than elsewhere.

Before you buy, send stamp for catalogue to

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AND THE GROWTH FOREVER DESTROYED WITHOUT THE SLIGHTEST INJURY OR DISCOLORATION OF THE MOST DELICATE SKIN.

Discovered by Accident. In compounding, an incomplete mixture was accidentally spilled on the back of the hand, and on washing afterward it was discovered that the hair was completely removed. We purchased the new discovery and named it MODENE. It is perfectly pure, free from all injurious substances, and so simple any one can use it. It acts mildly but surely, and you will be surprised and delighted with the results. Apply for a few minutes and the hair disappears as if by magic. It has no resemblance whatever to any other preparation ever used for a like purpose, and no scientific discovery ever attained such wonderful results. IT CAN NOT FAIL. If the growth be light, one application will remove it permanently; the heavy growth such as the beard or hair on moles may require two or more applications before all the roots are destroyed, although all hair will be removed at each application, and without slightest injury or unpleasant feeling when applied or even afterward. MODENE SUPERCEDES ELECTROLYSIS.

Recommended by all who have tested its merits—Used by people of refinement.

Gentlemen who do not appreciate nature's gift of a beard, will find a priceless boon in Modene, which does away with shaving. It dissolves and destroys the life principle of the hair, thereby rendering its future growth impossible, and is guaranteed to be as harmless as water.

Young persons who find an embarrassing growth of hair coming, should use Modene to destroy its growth.

Modene sent by mail in safety mailing cases, postage paid, (securely sealed from observation) on receipt of price, \$1.00 per bottle. Send money by letter, with your full address written plainly.

Correspondence strictly private. Postage stamps received the same as cash. (ALWAYS MENTION YOUR COUNTY AND THIS PAPER.) Cut this advertisement out.

LOCAL AND GENERAL AGENTS | MODENE MANUFACTURING CO., CINCINNATI, O., U. S. A. WANTED | Manufacturers of the Highest Grade Hair Preparations.

You can register your letter at any Post-office to insure its safe delivery.

We Offer \$1,000 FOR FAILURE OR THE SLIGHTEST INJURY. EVERY BOTTLE GUARANTEED.



Our Farm.

BUILDING A POULTRY-HOUSE.

RHE FARM AND FIRESIDE has given designs for nearly all kinds of poultry-houses, yet many readers write and inquire for plans of the "best poultry-house." If some design of a poultry-house could be adopted and to be made to apply to all climates, breeds and conditions, there would be no difficulty in the way, but, unfortunately, it is an impossibility to suggest any kind of poultry-house that would be acceptable to all.

Each individual, when about to construct a poultry-house, first estimates upon the cost, and as the matter of cost regulates every other detail connected with its construction, many preferred plans are necessarily overlooked. The number of fowls, the climate, the location and the prices of materials are all to be considered. Those who are not particular in regard to the cost often make the mistake of building the house in a style too elaborate, and pay more attention to the provision of conveniences for the attendant than for the accommodation of the hens, and they therefore fail in securing as good results as do those who own structures less costly.

The main object when building is to secure the greatest space possible on the floor for the least money. What the hens require most is plenty of room. They need a space upon which they can scratch and exercise in the winter, when the ground is covered with snow, and the roof may be of any kind of material, provided that the house is kept dry and warm during the cold season. Many persons pay more attention to ventilation than anything else, but while ventilation is a very important matter in summer, the admission of draughts of air in winter is very damaging, leading to roup and other diseases. It is a difficult matter to construct a poultry-house that is suitable for both winter and summer, and to keep the hens comfortable at all seasons.

The floor of the house is another difficulty over which many cannot decide. A board floor is the best, but such a floor leads to the harboring of rats, which do great damage to chicks. The rats may be prevented by stone or cement, but if the wooden floor is to be thus underlaid, it adds to the expense, while a stone or cement floor uncovered is cold and damp, unless kept well littered with leaves, cut straw, or some suitable material. It is always cheaper to have one or more poultry-houses connected, with only one partition between, but such a plan brings the flocks nearer together, and does not permit of allowing ample space for foraging if a large number of hens are kept.

Cheap poultry-houses may be made as serviceable as those that are more costly. For winter they will be improved if lined with prepared paper, but then again we find that lice will harbor under the paper in summer; hence, as soon as an advantage seems to be secured at one season, another obstacle arises at some other time. There is no "best" poultry-house. Each one must judge for himself, by considering the expense he can bear, and to make all the provisions possible for the inclemencies of his climate, the main object being, as we stated, the securing of the most room possible on the floor for the least cost.

MOULTING HENS.

The best food for moulting hens is lean meat. To have hens lay in winter, the early moulting hens must be fed on food that will assist to renew the feathers. Fat foods are not desirable, as no heating elements are necessary in summer. Foods rich in nitrogen and the phosphates are in demand by moulting hens, and of the grain foods, bran is the best. The bran should be scalded, and to a pint of bran should be added half a pint of corn-meal and a gill of linseed-meal, mixed to a stiff dough with milk. Such a mixture, with a little lean meat occasionally and an allowance of green food, should enable the hens to moult quickly and easily, and without becoming debilitated at any time during the process of moulting. Twice a day is sufficient to feed them, and they should be given all that they will eat. It is best to remove all hens that begin to

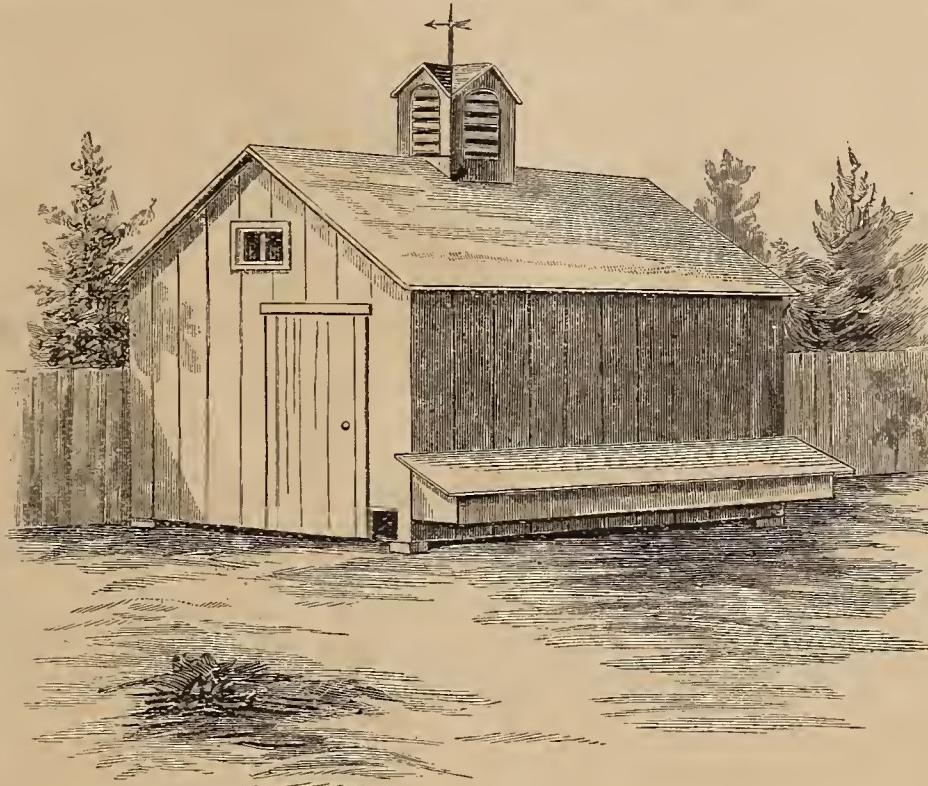
moult from the others, as they should be fed in a different manner. The quarters should be dry, as the hens may not have any feathers on their bodies at certain stages of the moulting process.

THE MANURE HEAP.

Let the hens work in the manure heap all they wish. They will find a large amount of valuable food, and they will work the manure up into a fine condition, by scratching over it, that will render it the best that can be used for the garden or for flowers. There is a large proportion of food in the manure of animals that will be of service to the hens, and they should have the privilege of securing it as a matter of economy.

A CHEAP POULTRY-HOUSE.

Mr. L. A. Dunlap, Betzer, Mich., sends a plan of his poultry-house, which he describes as follows: "The house is small, being 8x10 feet, and 6 feet high. The cost is about \$7 for material, not estimating labor or hauling. I keep about 40 fowls. Fig. 1 is the external, and Fig. 2 the ground plan, view of the house. On the south side are two windows, and also on the east side, above the door. On the north side are the nests. The small shed roof, under which are eight nests,



A CHEAP POULTRY-HOUSE.—FIG. 1.

are shown in the ground plan at A. The perches (B) are level, and 18 inches from the floor, they having a hinge, so as to be raised up and fastened to the roof for cleaning. This leaves the floor all clean. C is the dust-box, and D D the large and small doors. E E are windows. The material used was 290 feet of $\frac{3}{4}$ -inch boards, 80 feet of one-inch boards, 300 feet of ribs, 300 feet of battens, five bundles of shingles, 25 pounds of tarred paper, glass, hinges, etc., and 22 pounds of nails. I use cut straw on the floor, which keeps it clean."

BARN SWEEPINGS.

The hay seeds, and also the crumbled or broken leaves of the hay, make the best of feed for chicks, and even for adult fowls. The sweepings should be saved and stored in barrels. If used in winter, by being scalded and ground grain added to it, the mixture will be quite a luxury to all kinds of poultry. The seeds of wheat or any

CHOLERA GERMS.

Where cholera has once appeared, it will break out again if the germs are not all destroyed. To do so, it is best to clear out all the hens, and not allow one on the farm until the premises are cleaned, as the disease may be continually appearing if this precaution is not taken. To eradicate cholera requires care and labor, and the work must be done patiently, as well as repeated every week, for a month or two. Dissolve a pound of copperas and a pound of blue-stone in six gallons of boiling water. When cold, add one pound of ordinary sulphuric acid, and then add ten gallons of cold water, sprinkle the mixture everywhere, on the ground, in the poultry-house, and on every spot that a hen has at any time occupied, finally drenching the place with lime-water or whitewash. It destroys lice, also.

REFUSE FOOD FOR POULTRY.

In the summer season the hens on the range secure a large share of food that cannot be utilized in any other manner, and where a small flock is kept and confined in a yard, in some suburban location, they can be kept on the waste or refuse of the family. The hen will subsist on all kinds of food—meat, grains, seeds, fruits and veg-

DISEASES FROM PIGEONS.

The pigeon, as is well known, will feed at all the poultry-yards in a neighborhood, and is no respecter of owners. A flock of pigeons will soon learn to know the feeding hours, and will alight in yards when not desired. They are liable to carry disease from one yard to another, even on their feet, and, as they are subject to many of the diseases that affect fowls, and particularly roup, they are a nuisance in any community. They will also introduce lice from a distance. If one wishes to keep pigeons he should do so by keeping them confined in wire yards, covered, and not at the expense of his neighbor's feed, with the risk of causing disease in all the flocks. There should be some protection for those who do not wish pigeons in their yards.

POOR HATCHES IN SUMMER.

Eggs will hatch better from April to August than will eggs laid after that time. This is due to the fact that the hens are not in as full vigor as in the spring, and because they are close on the moulting period. The chicks hatched late are not as strong and vigorous when hatched at this season as those hatched earlier, but they will have the advantage of warmer weather. Lice, however, destroy more late chicks than disease, and unless chicks are protected against the pests it will be economical not to allow hens to hatch broods so late.

SHARP GRIT.

Even on stony ground the hens may, by daily foraging over the same space, use up all the available material that is serviceable as grit. Smooth, round gravel is not suitable. Hens require something sharp and cutting, or they will be unable to properly masticate their food. The broken china and crockery may be utilized with advantage for grit by pounding it into small pieces (about the size of beet seed), and scattering it wherever the hens forage, as they will search for and find every piece.

FRESH EGGS IN SUMMER.

To keep eggs fresh for a long time, remove the males from the hens. Eggs from hens that are not with male will keep four times as long, with the same care, as those from hens that run with males, and such eggs may be shipped to any distance, where they are sure to arrive in a fresh and marketable condition, even in the warmest weather.

THE WATER-TROUGHS.

Wooden water-troughs are the best in summer, but they sometimes become slimy on the sides. Take an old broom and brush them well, washing with soap-suds, and then rinse with clear water. As the water-trough is the source of spreading disease, they cannot receive too much attention in the matter of keeping them clean.

INQUIRIES ANSWERED.

Ferrets.—R. A. B., Ringtown, Ohio, writes: "Do ferrets harm poultry in any manner?"

REPLY:—Yes; they are as destructive as minks or weasels.

Hens Eating Feathers.—M. T. M., Scammon, Mich., writes: "Please give a remedy for hens pulling feathers from each other."

REPLY:—It is a vice acquired, and can only be cured by separating the guilty birds from the others. It occurs mostly with active birds that are confined and not given a variety of food.

Caponizing.—D. B. W., Bromer, Ind., writes: "To what extent does caponizing the cockerels increase their value?"

REPLY:—In April and May they sell at from 25 to 35 cents per pound, in our large cities. A capon grows faster and reaches a heavier weight than a cock, and its flesh is better flavored.

Turning Eggs in Incubator.—L. H., Jackson Summit, Pa., writes: "Please explain what is meant by turning eggs in an incubator."

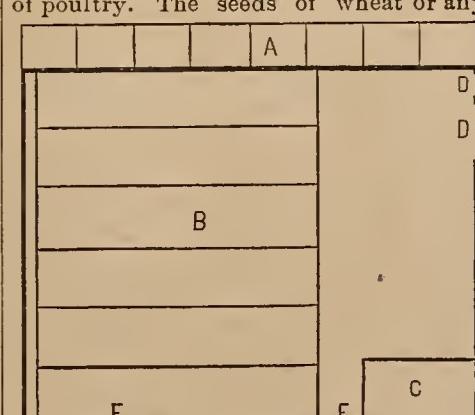
REPLY:—It means to simply turn each egg round, so as to change their position, and may be done by hand or with rack or tray.

Loss of Chicks.—E. W., Onsburg, Mo., writes: "What is the cause of chicks having the skin puffed up on the throat, breast and back? They live a short time and die."

REPLY:—It is the result of indigestion. Allow them fine, sharp grit, and give a variety of food. Sometimes it is caused by some certain food, which should be avoided. Add five drops of tincture nux vomica to each pint of the drinking water.

Crop Bound.—L. C., Sewickley, Pa., writes: "I have a hen which has just weaned her chicks. Her crop hangs down four inches, and lies full. She has not eaten for two days."

REPLY:—There is an obstruction in the passage leading from the crop to the gizzard. Give a teaspoonful of castor oil, and work the crop well with the hand until it becomes soft, which may require ten minutes or more. Otherwise, it may be necessary to remove the obstruction by making an incision in the crop.



A CHEAP POULTRY-HOUSE.—FIG. 2.

other grains that may be wasted on the barn floor will be serviceable for the hens. It should be an inducement to thoroughly clean out the barn, sweeping it carefully every season, before storing the new crops, in order to secure the valuable poultry food that may be obtained in that manner.

BEECHAM'S PILLS
Cure SICK HEADACHE.

25 Cents a Box.
OF ALL DRUGGISTS.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Best Varieties of Wheat.—A. J. T. See article on wheat varieties on another page of this issue.

Planting Asparagus and Rhubarb in Autumn.—J. H., Hospers, Iowa, writes: "Will Joseph please tell me if rhubarb and asparagus transplanted in fall do well, and what winter protection, if any, is needed?"

REPLY BY JOSEPH:—Have ground well prepared and properly enriched, and set early enough so the plants will become well established in their new location before heavy freezing, and they will do all right. No special winter protection is needed here with us; but you may put a coat of good manure on the beds late in the fall; it will be all the better for the plants. Scatter it somewhat in spring, and work it into the surface with hoe and cultivator.

Nitrates and Sulphate of Ammonia.—F. G. R., Hyrum, Utah, writes: "Is nitrate of soda the same as common saltpeter, as sold in stores? How is sulphate of ammonia applied, and at what quantity per acre?"

REPLY BY JOSEPH:—Nitrate of soda is known also as cubic or Chili saltpeter, and an altogether different thing from the saltpeter of our stores, which is nitrate of potash. The only constituent of real value in the former is nitrogen, while the latter also contains potash, and therefore is much more valuable and much more expensive than the other. Sulphate of potash looks like fine salt, and, like dry nitrate of soda, can be applied broadcast in the same manner as one would sow wheat or rye. A good application for vegetables is three hundred to five hundred pounds per acre; for wheat, a hundred pounds should be all sufficient.

Timothy for Hay.—A. H. G., Clifton, Tenn., writes: "(1) What kind of land is best adapted to timothy culture? (2) When is the best time for sowing? (3) What is the best way of putting seed into the ground—with Acme barrow, roller or brush? (4) How much seed per acre? (5) Is timothy usually cut more than once a year in Tennessee? (6) What is an average annual yield of timothy per acre, on good land? (7) At what stage is it best to mow timothy for hay? (8) How long should timothy hay lie in the field, after being cut, before taken up?"

REPLY:—(1) A good, rich, clay loam. (2) About the first of September, or at the beginning of the autumn rains. (3) With a good broadcast seeder, on land thoroughly prepared with roller and harrow. (4) About six quarts. (5) Once a year. (6) From one and one half to two and one half tons. (7) The best time is just as the bloom drops. (8) Only long enough for it to cure. That cut after three o'clock, one afternoon, can be put in the mow the following afternoon, if conditions are favorable.

Squash-vine Borer.—H. E. B., Great Neck, L. I., writes: "Will you kindly tell me what is the trouble with my cucumbers? They have been growing well, and fruit in fair quantities since July 4th; all at once a plant, apparently healthy, droops and in a day or two dies. Sometimes a lateral vine will remain green and continue to grow for a few days after the main vine dies. On examining the roots, some appear healthy, while others are withered. I do not find worms in the roots; soil is a sandy loam, compost, horse and hog manure mixed. Some of the plants were started in the green-house, others from seed sown where the plants now stand. Last year the vines were affected in the same manner. Muskmelons and Hubbard squash are similarly affected, but only a few of them thus far."

REPLY:—Your cucumber vines have probably been attacked by the squash-vine borer. The young larvae, from eggs laid by the moth upon the vines near the roots, burrow into the center and feed upon the succulent interior. Look for whitish worms in the vines, not in the roots.

Fertilizers for Grain.—W. W. C., Porter, Wash., writes: "Our land, a coarse clay, produces all kinds of fruit, but no good crop of wheat or oats. What would be the best and cheapest fertilizer to use? Wood ashes have good effect, but are not available in quantity. Commercial fertilizers cannot be had at prices that would justify their use. Would lime or plaster answer, and if so, how applied?"

REPLY BY JOSEPH:—Use all the ashes you can get; but it is very likely that you need phosphoric acid mostly, and of this even barn-yard manure has but a small percentage. Of course, lime and plaster do not contain it. If possible, use bone or fertilizer of any kind derived from bone. Lime and plaster may help you to increase a few crops, at the expense of the soil fertility. Also use clover in rotation. Lime and plaster may be put on broadcast, or with the drill. Use a few barrels of lime to the acre. A hundred pounds or so of plaster will probably give you as good results as double that quantity.

ashes, Poultry Droppings and Muck.—G. D. S., Fleetwood, Pa., writes: "I have unleached wood ashes (oak and chestnut), hen droppings and dry muck from a fish dam. How should they be mixed and applied on onions, muskmelons, celery and cauliflower, or in general, on a loamy soil? Which of the above three might mostly be used in cold frames for cauliflower?"

REPLY BY JOSEPH:—If you use plenty of dry muck you can mix them all and leave them thus until used, especially if the heap is covered with a layer of the dry muck. A compost, made in this way, with muck (the more the better) can be used pretty freely on cauliflower and other garden crops, and will seldom fail to give highly satisfactory results. Use all these materials you have; the exact proportion is of less account, and what would be best in one case might not in another. For use in frames, of course, some judgment is needed. Some people would use an excessive proportion of manures in such a small space, but with plenty of muck and a reasonable proportion of ordinary loam, there will be no danger.

Impriving Sand Knolls—Posts for Corn-cribs.—B. G., Milan, Mich., writes: "I have a small farm with a good clay subsoil. In (breed fields) (although the farm is comparatively level) there are sandy knolls and clay hollows. These knolls give me a great deal of trouble. Any crop, sowed or planted, comes up all right, then turns yellow and seems to stand still for awhile, and at harvest,

produces but little. Manure helps slightly, but seems to soon leach away. When in meadow, the hay is very light and some sorrel grows. I sometimes think there is an excess of acid in the soil and it needs lime. If so, please state its manner of application and how much. I intend to sow this fall one of these fields to wheat.—Can you suggest any better method of a foundation for a corn-crib than posts with a tin pan inverted, so as to render it rat and mice proof?"

REPLY:—From your description, it seems that your sandy knolls are naturally very sterile, and unless they have a clay subsoil it will be difficult to permanently improve them. If the subsoil is loose gravel the soil cannot retain sufficient water to bring a crop to perfection, even if you do apply fertilizers. Lime would do no good. If they had a clay subsoil you could improve them.—Use stone or brick piers, or set the posts on stone foundation.

Ashes and Bone for Wheat.—A. J. L., Winchester, Va., writes: "I can get ashes, made from the refuse bark burned in the furnace of a bark-mill, at fifty cents per two-horse-wagon load. How many pounds should be sown, together with dissolved or ground bone, and such other ingredients as may be necessary for wheat? Soil, naturally fertile, but badly worn."

REPLY BY JOSEPH:—The land has probably been used for the production of grain-crops for many years, and received perhaps an occasional dressing of barn-yard manure. In this case the greatest need of soil and crop would probably be phosphoric acid, of which the ashes in question have perhaps two percent, and the dissolved bone fifteen or twenty percent. Consequently, I would use dissolved bone in preference to anything else. On the other hand, the ashes, at the price named, are as cheap a plow food as anybody can ever hope to get. It is possible that the soil has been formerly cropped in tobacco, and in consequence has been deprived of its potash also; or that phosphates have already been used on it for years, and aided in the removal of the potash by increasing the crops. If so, potash may be needed, and you cannot get it more cheaply, nor in a better shape, than in the ashes mentioned. Use it at the rate of, say four hundred pounds or more per acre, with a hundred pounds of dissolved bone, or bone-dust. It will pay you to buy all the ashes you can get at price named, even if you had to go ten miles after them. They are a most excellent manure for fruit and vegetable crops, even if you should not need them for the wheat. The needed nitrogen you can get by growing clover, or other green crops of the same order, like peas, etc.

Onion Queries.—C. A. B., Avon, Mo., writes: "What is best method for curing onions, and storing them during winter? What is best commercial fertilizer for onions, and best method of applying it?"

REPLY BY JOSEPH:—Pull the onions just as soon as the majority of the tops have fallen over and begin to waste away. Leave on the ground in windrows until the tops have all dried down, or if rain should threaten, take to an airy loft or barn floor and spread thinly, until fully cured. Then sort, removing all remnants of tops, etc., and try to sell them at an early opportunity, which is much better than to attempt keeping them over winter and running the risk of losing part of the crop by sprouting, rotting or freezing. But if you are bound to try wintering, you should have a storage-room that can be kept at a temperature near the freezing point—say from thirty-five degrees to forty-five degrees Fahrenheit. Put the bulbs in rather open crates, and keep well aired and dry. Onions can also be stored in pits, like potatoes, only guard against beating. It is better to have them freeze than to have them get too warm. The question of "best" commercial fertilizer for onions can only be answered in a relative manner. When ground is very rich and abundantly supplied with minerals (potash and phosphorus), nitrate of soda alone may be the best and cheapest fertilizer. In other cases ashes and nitrate of soda may be best; and a good, high-grade, complete manure, such as our leading fertilizer manufacturers offer under the name of special potato or special onion, or general vegetable manure, is usually safe to apply, even in pretty large doses—say a ton or more per acre.

VETERINARY.

Conducted by Dr. H. J. Detmers.
Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Protective Inoculation against Swine-plague.—G. T., Croton, Ohio, writes: "I see in the Journal that you would go to see sick hogs. My hogs are dying and I would like to have you come. I will meet you at Croton, if you will let me know when you can come."

ANSWER:—What the paragraph in the Journal and in other papers, taken from the Columbus Dispatch, refers to, is a protective inoculation against swine-plague, or so-called hog-cholera, and not a "cure." Its effect is somewhat like that of vaccination in regard to smallpox, and it is applicable only to healthy animals, not yet infected. If applied to animals already diseased, it might hasten their demise, at any rate, would do no good. Owing to the great liberality of Messrs. Mast, Crowell & Kirkpatrick, I am able to inoculate yet healthy herds of swine within one hundred miles of Columbus, Ohio, free of charge, under the following conditions: 1. The animals to be inoculated must not be infected and must not have been exposed. 2. They must not be exposed to an infection until ten days after the inoculation. 3. The herd must not be too small, and not number less than fifty animals, or if it does, two or more herds must be at the same place, or close together, so as to make it worth while to open a bottle of lymph, containing material for about one hundred hogs. If a bottle has once

been opened its contents will soon spoil. 4. The owner of the hogs to be inoculated must be a responsible person and pledge himself to make a truthful report, first, ten days or two weeks after the inoculation and, secondly, after the inoculated animals shall have been sufficiently exposed to an infection to catch the disease, provided they had not been inoculated. To ascertain this, four or five per cent of the herd will not be inoculated, but be left as control animals. So far, the protective inoculation has proved to be very successful.

DR. H. J. DETMERS,
Professor of Veterinary Surgery, Ohio State University, 35 King Avenue, Columbus, Ohio.

Umbilical Hernia.—G. K., Amanda, W. Va., consults answer to similar inquiry in FARM AND FIRESIDE of August 1st.

Vertigo.—R. H., Bellaire, Ohio. Your horse seems to be subject to attacks of vertigo. There is no cure, unless the cause or causes can be removed. For further information consult recent numbers of this paper.

Probably a Broken Bone.—C. F. S., Clermont, Fla. Your horse, when injured, probably broke a bone, either the scapula, or one of the processes of the humerus, and if such is the case, only time can effect improvement to a certain extent. Whether or not further improvement will take place in your case, I do not know.

Paralytic Pigs.—A. G. L., St. Anne, Ill. Your pigs are paralytic. If they have yet strength enough to take some voluntary exercise, let them have the benefit of a pasture, especially one which contains clover. If that cannot be done, at any rate change their diet, and feed them milk and some bran, and do not keep them on food too poor in phosphates.

A Fistula.—J. R. W., Eagle Lake, Texas, writes: "I have a fine horse with a fistula. What can I do to effect a permanent cure?"

ANSWER:—Employ a good veterinarian to treat your horse. If you wish to attempt the treatment yourself, consult back numbers of the FARM AND FIRESIDE, in which directions have been repeatedly given.

Time for Breeding.—W. K., Coal Harbor, N. D., writes: "Is there anything in the theory that a mare should be bred the ninth day after foaling?"

ANSWER:—There is no theory about it. The facts are that an otherwise healthy mare will be in heat eight or nine days after foaling, and that her sexual organs at that time will be in a proper condition for conception.

Flaxseed Meal.—R. & S., Kenton, Ohio, writes: "I notice in FARM AND FIRESIDE of July 13th a query asking you whether flaxseed meal was good feed for horses. You answer no. Why isn't it a good feed?"

ANSWER:—I have neither time nor space to write a treatise on digestion and assimilation. Therefore, if you object to the answer given, go to work and make experiments, and find out the facts for yourself.

A Cutaneous Eruption.—H. E. R., writes: "I have a horse which has had a humor for a year or two. It comes in round spots, about the size of a silver dollar, and looks something like a ringworm."

ANSWER:—Your rather meager description leaves me in doubt as to the nature of the cutaneous eruption. Still, you may try the treatment recommended in these columns against pruritus or prurigo.

Paralysis.—F. C. S., Perinton, O., writes: "About six weeks ago I noticed that one of my hogs seemed weak in its hind legs. Its toes turned under when it attempted to walk. At first we supposed it was 'kidney-worm,' but in a few days the front legs became weak, and now it cannot stand at all. It eats milk heartily, but does not care for anything green. There are also lumps on its legs. Was it caused by being kept on a hard floor, and what treatment is best?"

ANSWER:—It is doubtful whether any treatment will be of any avail.

Itching of the Tail.—P. L., Forrest City, Ark., writes: "I have a good mare, which is not well. She is often rubbing herself, at root of tail, against the stable. What remedy shall I use?"

ANSWER:—Itching of the tail in horses, may be due to the presence of worms in the rectum, but in most cases it is caused by an accumulation of dirt at the root of the tail. Hence, clean the tail with soap and warm water, and then apply a three or four per cent solution of carbolic acid. Repeat this treatment once a day, and keep the animal clean and well groomed.

St. John's Weed.—Z. F. J., Scottsville, Va., writes: "I have a two-year-old colt, with two white feet, which has been poisoned by St. John's weed. Please give me a remedy."

ANSWER:—I would like to comply with your request, but I must confess I do not know any poisonous plant called St. John's weed, neither do I know any weed that poisons the feet of a horse. If your colt has scratches or grease-heel, you will effect a healing if you keep the animal out of the mud, keep the feet clean, and apply to the sores three times a day a mixture of liquid subacetate of lead, one part, and olive-oil, three parts.

Veterinary College.—H. J. McN., Arcade, N. Y., writes: "Will you kindly inform me where your state veterinary college is located, or will you kindly ask the professor of the college to send me a catalogue with terms for course, etc.?"

ANSWER:—A state veterinary college, or rather the school of veterinary medicine of the Ohio State University, is located at Columbus, the state capital. Those desiring information are requested to write to the president, Dr. W. H. Scott, University Grounds, or to the secretary, Capt. Alexis Cope, 170 North High street, Columbus, O., for a catalogue, which contains full information.

Wants Books.—W. P. P., Mechanicsburg, Ohio, writes: "Please send me all bulletins you may have on the diseases of sheep, particularly of scab, which seems to prevail in many sections of our country. If you have nothing bearing on this subject, perhaps you can direct me where I can obtain the fullest and most reliable treatment of this quite too common disease?"

ANSWER:—I have no books to distribute, and am not in the book business. Apply to the Secretary of Agriculture, Mr. J. Russel, Washington, D. C. As to the scab of sheep, there never has been devised anything better than a good tobacco decoction.

Probably a Polyp, or Some Other Morbid Growth.—J. S., Chili Center, N. Y., writes: "I have a cow that began to breathe bad this winter two years ago, and I thought perhaps she had got something in her nose,"

Sometimes we didn't notice it at all, and then at other times she breathed as though something was growing in her nose, and now, it discharges."

ANSWER:—Your cow, probably, has a polyp, or some other morbid growth, somewhere in the respiratory passages, obstructing the latter. Whether or not the obstruction can be removed by a surgical operation depends upon its seat and its nature. But even if it can be, and is removed, it is very apt to make its reappearance.

Probably Degenerated Lymphatic Glands.—H. E. R., Randal's Store, Texas, writes: "I have a horse four years old that had the distemper when he was about ten months old, and again when he was about twenty months old, and came very near dying both times. The distemper seems to be all through his system. His head and neck will swell and then go down again."

ANSWER:—The repeated attacks of disease probably caused a degeneration or partial destruction of several lymphatic glands, and, maybe, other permanent morbid changes. If such is the case, you will find that medication will be of no avail. Proper diet, sound food easy of digestion, and voluntary exercise—no work—constitute the treatment, and will lead to improvement, if improvement is possible.

May Have Worms.—G. W. T., White Post, Ky., writes: "My mare has become tender in her fore feet. She travels good on smooth, level roads, but when she gets on rocky or rough siding ground she gives in her front feet as if they were sore. If she steps on anything hard she limps for a few steps. She also has bad wind-puffs on her joints. Tell me how to cure them."

ANSWER:—Your mare may have worms, or bruises in the sole. A reliable diagnosis can be made only after a careful examination, and the treatment to be applied must be in accordance with the result.

May Be a Blood Extravasate.—W. S. H., North Freedom, Wis., writes: "I have a Jersey cow that has a hard bunch on one hind leg, on the outside. It commenced with puffy swelling and some heat, then becomes hard like a callous. The puffy swelling is extending up her leg, along the cords. She is not lame, and it does not appear tender; as I can pinch and rub it, and she does not flinch. It commenced in April. I have used some iodine on it."

ANSWER:—The "hard swelling," if produced by external violence, and if it came on suddenly, may be due to an extravasation of blood; still, a definite diagnosis, in such a case, requires a thorough examination and a knowledge of all circumstances. Therefore, it may be best to consult a veterinarian. The iodine treatment can do no harm, and is all right as far as external applications are concerned.

Cornurus Cerebralis.—A. J. T., Winchester, Va., writes: "What is a remedy, if there is one, for cornurus cerebralis in sheep?"

ANSWER:—If the cyst-worm is superficially situated, trepanation may be performed, and the worm extracted. If it has its seat deeper in the tissue of the brain, there is no remedy. The prevention consists: (1) In burying the dead sheep so deep—particularly their heads—that neither dog nor wolf can resurrect them. (2) In destroying every dog that has a tape-worm, or if the dog should be a valuable one, in freeing him from his tapeworm, and in keeping him shut up and burning his excrements until he is free. (3) In waging a relentless war against all stray and strange dogs. It may not be necessary to say that cornurus cerebralis is the larva of a certain tapeworm, which inf

Our Miscellany.

OH, THE HAPPY DAYS OF CHILDHOOD!

Oh, the happy days of childhood,
When bare-legged boys we ran,
Precious pagans gladly piping,
Though we knew it not, to Pan;
When, within some fairy circle
We oft found ourselves at home,
Whence we fluted from a grass blade
Or made music on a comb!

Oh, the happy days of childhood,
All undimmed by doubts and debts,
When we wooed some little sweetheart
In short frocks and pantaloons!
Oh, the happy days of childhood,
When to joy's own gladsome gales,
All unheeding time and trouble,
We two trimmed our tiny sails!

Oh, the happy days of childhood,
When we played at "keeping house,"
And with bits of broken dishes
Made our milky mad carouse!
Oh, the happy days of childhood,
When in pairs we made "mud pies,"
And all vaguely from our fancies
Saw a future fair arise?

Oh, the happy days of childhood,
When we quarreled and made up,
When the sweet was as the bitter,
Ten to one in every cup;
When the little girls who lorded
O'er us all our baby lives
Loomed up proudly in prospectus
As our winning willful wives?
Oh, the happy days of childhood,
When the fairies, not the fates,
Seemed to stand for us awaiting
To open wide life's golden gates;
Looking backward through the vista
Of a worldling's worn-out ways,
What to faded eyes is fairer
Than our childhood's happy days?

M. N. B.

NEW YORK CITY employs 3,543 public school-teachers.

A NEW ORLEANS man keeps a lizard on his table to guard valuable papers.

AT Birmingham, Ala., there is an old hen which kills sparrows. She coaxes them up with bait.

If the Mediterranean were lowered 660 feet, Italy would be joined to Africa and three separate seas would remain.

IN the hands of the physician, turpentine is of great value in typhoid fever, and of late is used in yellow fever with great success.

AT a military dinner in New York the other evening, the ice-cream came in the form of cannon-balls, guns, swords and drums.

RICHARD TELLIS, who lives near Clifford, Mich., served in thirty-six engagements during the war and never lost a drop of blood.

A VINEYARDIST in Sonoma county, Cal., purchased 10,000 paper bags to cover the young vines and protect them from the grasshoppers.

THE explosion of a dynamite cartridge to blow up an old ship near Mobile, sent to the surface a fish that weighed more than 200 pounds.

THE limited mail on the Pennsylvania line between Columbus, Ohio, and Indianapolis, Ind., is said to be the fastest railroad train in America.

A SIMPLE REQUEST.—She (answering knock)—"Oh, my, George!" He (a disappointed suitor)—"Won't you please omit the comma?"—Yankee Blade.

A TEASPOONFUL of turpentine given in half a glass of sweetened milk, followed in an hour or two by a full dose of castor-oil, seldom fails to cure worms.

THERE is a boy in Centreville, Iowa, whose hair always curls a few days before the arrival of a storm. When his barometric locks begin to kink, the people in the neighborhood prepare for rain.

VOLCANIC aeration is the name given to a process for the reader and improved manufacture of those sparkling mineral waters which have of late years grown in such increasing demand.

As a liniment, turpentine, with equal parts of laudanum, camphor and chloroform, is unsurpassed. Sprains, rheumatic pains, bruises and sometimes even neuralgia yield to its magic influence.

ELECTRIC light has been employed advantageously on board of a West India steamer crossing the ocean, to keep alive and flourishing certain plants which were being transported for acclimatization.

THE smallest "moonsblue" distillery ever captured by the revenue officers was found recently at Atlanta, Ga., and sent to Washington as a curiosity. Its capacity is about three gallons. It is constructed so as to be operated on an ordinary cooking-stove, and is complete in every detail.

FEW REMEDIES after sixty years trial and constant use, retain their position as the best; yet, such is the case with Dr. D. Jayne's Tonic Vermifuge. Whether as a tonic or strengthener in dyspepsia in adults, or the indigestion and derangements of the stomach in children, it is simply invaluable; and as a Worm remedy, it is one of the most safe and best. Sold by all druggists.

Two Milwaukee girls in their teens climbed, by means of outside ladders, to the top of the tallest chimney in that city, waved their handkerchiefs to the crowd and descended on the ladders. The chimney is 225 feet tall.

IN the towns and cities of Chile all the shopping of any consequence is done in the evening. In Santiago the stores are open until midnight, and during the hot afternoons, when everybody takes a siesta, they are locked up.

A CHICAGO company is manufacturing illuminating gas at a cost of 2½ cents per 1,000 feet, and fuel gas at 1½ cents. Such is the claim made by the inventor of the process, and it is asserted that the era of cheap lighting and heating is now present.

THERE are two young women students in the law department of the National University of Chili, at Santiago, but as such independence and progressiveness in women are looked upon with disfavor there, the position of the señoritas is not entirely enviable.

BEECHAM'S PILLS cure Sick-Headache.

POPULATION OF SOUTHERN ALASKA.

The Census Bureau will soon issue a bulletin upon the subject of the population of southern Alaska, lying between the 55th and 60th parallels, or what may be termed the tourists' Alaska. The entire strip of mainland lying within these boundaries, says the bulletin, is mountainous in character, interspersed at intervals with huge glaciers, and is throughout exceedingly rugged and contour. The Stikine river is the only navigable stream on this coast, emptying its muddy current into the deep and placid waters lying sheltered behind the hundreds of wooded islands forming the Alexander archipelago. The superficial area of the district is estimated at about 28,000 square miles (about that of Maine), but the navigable waterways between its islands and shores have an aggregate length of from two thousand to three thousand miles. Nearly all of the settlements, with the exception of Juneau, Chilkat and a few small mining and fishing camps, are located on islands. Owing, probably, to its greater accessibility, this district has been the recipient of all the attention thus far bestowed upon Alaska by the general government in the way of courts of law, mail service, etc.

The total population is given as 19,929, so far as ascertained. Full returns will, however, probably increase the number for the whole territory to about 28,000. Of the population as far as ascertained, 4,401 are white, 82 black, 1,568 mixed, 11,735 native and 2,125 Chinese. Though the white element has greatly increased in number, the total for the district under consideration, owing to a decrease among the native tribes, falls a little below the census of 1880. The number of children of school age in this district is 7,636, and the average daily attendance at school is 32. The total number of males over 21 years of age, native born or naturalized, by treaty or otherwise, who would be entitled to vote should Alaska be granted a representative government, is 969, of whom 69 are among the transients.

THE OCEAN'S FLOOR.

The whole ocean is now mapped out for us. The report of the expedition sent out from London for the purpose of ocean surveys has recently been published. Nearly four years were given to the examination of the currents and the floors of the four great oceans. The Atlantic, we are told, if drained, would be a vast plain with a mountain range in the middle running parallel with our coast. Another range crosses it from Newfoundland to Ireland, on the top of which lies the submarine cable. The ocean is thus divided into three great basins, no longer "unfathomed depths." The tops of these sea mountains are two miles below a sailing ship, and the basins, according to Reclus, almost five miles. These mountains are whitened for thousands of miles by a tiny cream species of shell, lying as thickly on their sides as frost crystals on a snowbank. The deepest parts are red in color, heaped with volcanic masses. Through the black, motionless waters of these abysses move gigantic, abnormal creatures never seen in upper currents.

There is an old legend coming down to us from the first ages of the world on which these scientific deep-sea soundings cast a curious light. Plato and Solon record the tradition, ancient then, of a country in the western seas where flourished the first civilization of mankind, which, by volcanic action, was submerged and lost. The same story is told by the Central Americans, who still celebrate in the Fast of Izcalli the frightful cataclysm which destroyed a continent loaded with populous cities. Dr. Bourbourg and other eminent archaeologists assert that this lost continent extended from the coast of Africa to near the West Indies. The shape of a plateau discovered in surveying the ocean's floor corresponds with this theory exactly. We may yet find the lost Atlantis.—*St. Louis Republic.*

GUS WAS IN NO DANGER.

"I say," said Gus de Jay, as he laid the paper across his knees, "this article says that a flood of intelligence is going to sweep the country."

"Well, deaf boy, don't let it worry you," replied Willie Washington; "you're not likely to be any flood sufferer, you know."—*Washington Post.*

THE PHOLAS.

This is a small species of bivalve shell having the remarkable faculty of boring into the hardest rock. It is one of the greatest wonders known to the conchologist. Great blocks of granite and marble that have fallen overboard or been sunk in sunken vessels, have been found, years afterward, completely honeycombed by these curious little borers, they themselves being imprisoned in the cavity, obtaining their food from the water that flowed in and out. Many explanations have been given as to the method by which they bore into such extremely hard rocks.

The shell is known to contain aragonite, and some suppose that constant friction enables the shell to subdue the rock. Others, again, are of the opinion that the shell secretes some corrosive fluid which dissolves the rock and enables the creature to bore its hole. Some of the most interesting samples of its work known to the scientists may be seen in the pillars of the Temple of Serapis, Italy. There the land became submerged long enough for the shell to do its curious work. After a lapse of ages the land has now risen, and the holes with their empty shells are plainly to be seen, the marble pillars being completely permeated by them. These and other exhibitions of its work have caused Pholas to be called "the shell miner," and curiously enough, it is furnished with a lamp—a rich blue-white light that shines out all over the entire body. Some remarkable experiments have been made with the shells of Pholas. It appears that they are equally luminous whether dead or alive, wet or dry. One scientist who was testing different substances in view of obtaining light without heat, put one of the shells in a jar of milk and used it to read by. In clear, distilled water the light shines with undiminished brightness for years. Placed in honey, the color of the light is turned to a light green; even then, however, the shell continues to give a good light for years.

AN ESSAY ON MAN.

Man that is born of woman is small potatoes and few in a hill. He rises up to-day and flourishes like a rag-weed, and to-morrow or the next day the undertaker hath him. He goeth forth in the morning warbling like a lark, and is knocked out in one round and two seconds.

In the midst of life he is in debt, and the tax collector pursues him wherever he goeth. The banister of life is full of splinters, and he slithers down with considerable rapidity. He walketh forth in the bright sunlight to absorb ozone, and meeteth the bank teller with a slight draft for \$357.

He cometh home at eventide and meeteth the wheelbarrow in his path. It riseth up and smiteth him to the earth, and falleth upon him, and runneth one of its legs into his ear.

In the gentle springtime he putteth on his summer clothes and a blizzard striketh him far from home and filleth him with cuss words and rheumatism. In the winter he putteth on winter trousers and a wasp that abideth excitement. He starteth down into the cellar with an oleander and goeth backward, and the oleander cometh after him and sitteth upon him.

He buyeth a watch-dog, and when he cometh home from the lodge the watch-dog treeth him and sitteth near him until rosy morn. He goeth to the horse trot and betteth his money on the brown mare, and the bay gelding with a blaze face winneth.

He marrieth a red-headed heiress with a wart on her nose, and the next day the parent ancestor goeth under with a fee, arrest and great liabilities, and cometh home to live with his beloved son-in-law.—*Wichita County Democrat.*

THE MECHANIC'S CAPITAL.

The mechanic is sometimes looked upon as a man without capital. Sometimes he looks upon himself in this light. This is all a mistake. The man who earns \$1,000 a year has not only capital, but in these times of low interest, he has considerable capital.

The manufacturer and the merchant aim to increase their capital by a judicious handling of present means. The mechanic does, or should try, to increase his in the same way. Knowledge to the mechanic is capital, because it enables him to command more for his services. If he possesses simply the skill of the workman, he can make that skill earn him a certain sum per year, which sum is the exponent of the capital he has invested in his business. If, to the skill of the workman, he adds the knowledge of the man who thinks beyond present purposes, he earns more; or, in other words, he increases his capital.

The young mechanist, for instance, who learns machine drawing, is morally certain at some time to find use for it where it will stand exactly to him as the money of the capitalist stands to its possessor; although this is hardly a fair statement, because he will at once find use for it. When the man who earned \$1,000 a year by virtue of his skill as a workman, adds such a knowledge of his business as to earn \$2,000, he has as surely doubled his capital as the man who has twice as much money to invest in his business as he formerly had.

It is earnestly advised that every apprentice to the machine business shall do a little calculation for himself on this subject, always remembering the capital, which is the result of skill and knowledge, is seldom at a discount and never lost. It is just at this time in their lives when habits are formed that to a great extent determine the working capital with which they are to go through life.—*The Tradesman.*

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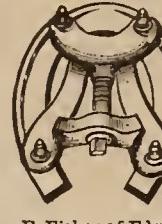
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ALEXANDER, N. Y., March 12, 1891.
Thanks to you for the Peerless Atlas. I had no idea it was half so good. Must undoubtedly meet justly-deserved merit.

MRS. A. D. MORGAN.

PALMETTO, GA., May 22, 1891.
I received the Sewing Machine some time ago and am well pleased with it. Would not take \$40 for it if I could not get another like it, and I only gave \$14. Would advise everyone wanting a sewing machine to send to you for it.

SARAH IRWIN.

LOUISVILLE, ILL., May 21, 1891.
I received the Books in good shape, for which accept my thanks. They are much nicer than I thought for. I don't see how you can give so much for so little money.

MRS. MARY HAMPSON.

MUSCOGEE, I. T., May 22, 1891.
I received my pictures, "Christ Before Pilate" and "Christ on Calvary," and am well pleased with them. We had them framed very nicely and now would not take \$5.00 apiece for them.

MAURICE MANUEL.

DECATURVILLE, OHIO, May 20, 1891.
I received the Atlas, Cook Book and Needles in good shape. Thought them all good, but am particularly well pleased with the Atlas, for which please accept my thanks.

S. J. MEADE.

Smiles.

WHAT SHE EXCELS IN.

A woman cannot bait a hook,
Or kill a mouse or rat;
Without a glass in which to look
She can't put on her hat.

A woman cannot throw a stone
And hit a thing kerplunk;
But, bless her, she, and she alone,
Knows how to pack a trunk.

The duds that she can stow away,
If man should pack them, are
So multitudinous that they
Would fill a baggage-car.

Detroit Free Press.

THEY WOULDN'T AGREE WITH HIM.

AND now, my dear madam," said the polite tramp, as she handed a nice slice of bread to him, "couldn't you give me a spoonful of preserves or something of that sort, to lend character and zest to this bountiful repast?"

"Waal, mister," answered the good woman, innocently, "I've got some preserves, but I don't guess they'd agree with you."

"Preserves! Not agree with me! And pray, madam, why not?"

"Waal, you see, they've worked a leetle." —*Detroit Free Press.*

THE PRODIGAL'S RETURN.

Mr. Ryley—"Fwhy are yez decoratiu', Mrs. Murphy?"

Mrs. Murphy—"Me b'y Danny is comin' home th' day."

Mr. Ryley—"I t'ought it wuz fer soire years he wuz sint up."

Mrs. Murphy—"It wuz; but he got a year off good behavure."

Mr. Ryley—"An' sure, it must be a great comfort fer ye to have a good b'y loike that." —*Puck.*

SHE SAID NOTHING.

A friend of mine got off a bright thng the other day. He called on a lady who has a pet dog she was trying to make bark, but the dog wouldn't, until finally she said: "Fido, if you will bark for me I'll kiss you."

Then my friend spoke up and said: "I can bark pretty well myself."

Griggs—"Ha, ha! What did the girl say?"

Briggs—"Nothing. She simply sent the dog away." —*Life.*

HE KNEW HER.

"I want to contest my wife's wll," said a countryman, breaking into a lawyer's office early Monday morning.

"Is she dead?" inquired the lawyer, for want of something better to say.

"You bet," blurted out the visitor; "I wouldn't be contestin' it if she wurzn't. You never knowed that woman, I guess." —*Detroit Free Press.*

MARRIAGE THE REFORMER.

Mrs. Feathers—"And you won't give me thirty dollars for that bonnet—you, who always protested that you loved me so extravagantly!"

Mr. Feathers—"Well, dear, since we have been married, you know, I find it's best for both of us if I love you economically."

A CONSISTENT ARTIST.

Miss Pearl White—"I wish you to paint my portrait."

Dobbins—"I'm sorry, madam, but I can't do it."

Miss Pearl White—"Why not?"

Dobbins—"I never copy other paintings."

BY THE SAD SEA.

"Well, this is act first," said the summer youth, as he put his arm around her and drew her tenderly to him.

"And it is also scene first," replied the summer girl, as she pointed to her frowning chaperone standing not ten feet away.

WENT BACK ON HIM.

Dashaway—"See here, uncle; I gave you a dollar the other day, on the plea that one of your children was dead, and I saw the little imp yesterday, as lively as a cricket."

Uncle Jasper—"Yes, sah; dat chile is de mos' disappointin' chile you eber see."

IT WAS THE SONG.

"He's after me, he's after me," sang a young man sitting on his boarding-house steps in the gloaming.

"Ugh," growled the landlady, "if you stop singing maybe he'll let up on you." —*Detroit Free Press.*

CURIOSITY, THY NAME IS WOMAN.

Johnny—"I was looking through the keyhole at Sally and Mr. Featherly, and ma came and stopped me."

Ethel—"What did she do then—spank you?"

Johnny—"No; she took a peep." —*Harvard Lampoon.*

UNANSWERABLE LOGIC.

"Pat, Pat, you should never hit a man when lie is down!"

"Begobs, what did I worruk so hard to git him down fer?" —*Kate Field's Washington.*

Read adv. of B. & O. R. R. on page 384, this paper.

STARTLING A STRANGER.

Down below Natchez, while the boat was running in close to the left-hand bank and had stopped her wheels to avoid a big tree floating in an eddy, we saw a native sitting on a stump fishing. He sat bent over, hat over his eyes, and there was scarcely a movement to tell that he was alive. We had a smart Aleck with us on the promenade deck, and he had no sooner caught sight of the native than he called to one of the deck-hands to toss him up a potato. A peck or more of the tubers were lying loose near a pile of sacks, and one was quickly tossed up.

"Now, see me startle him," said Smart Aleck, as he swung his arm for a throw.

The distance was only about a hundred feet, and his aim was so true that the potato landed on the native's head with a dull thud. His motions were so quick that we couldn't agree how he did it, but in about three seconds he had dropped his fishpole, pulled a revolver as long as his arm, and fired at Smart Aleck. The bullet bored a hole in his silk hat just above his hair, and the young man sank down in a heap and fainted dead away. When we restored him to his senses he carefully felt of the top of his head, looked back at the fisherman, and absently asked:

"Did she explode both boilers or only one?" —*New York Sun.*

NOT CLASSICAL.

"Have you any large-sized gentleman's gloves?" he asked.

"How large-sized a gentleman?" inquired the salesman, with a smile of frosty, Bostonian severity.

"Large enough, I think, sir," replied the customer, moving away, "to walk without any help to some other store where the clerks are not classical."

A LAUDABLE AMBITION.

Hotel proprietor—"You say you want a job as waiter. Your face seems familiar to me. Weren't you a guest of this hotel last year?"

Applicant—"Yes, sir. I have come around to get my money back."

A MUSICAL NOTE.

Ethel—"What would you advise me to do with my voice?"

Maud—"I shouldn't spend much on it, just now; when the man comes around you might have it tuned."

A FALSE DIAGNOSIS.

Miss Cropper—"How do they tell the age of a horse?"

Jack Crupper—"By the teeth."

Miss Cropper—"Oh, yes; whether they are artificial or not!"

THAT'S ABOUT IT.

"Papa, what is an agnostic?" asked Johnny Cumso.

"An agnostic, Johnny, is a man who knows very little and is not sure of that."

HER GREATEST GRANDFATHER.

She—"She says that one of her ancestors died at Saratoga."

He—"Yes; and was buried under the debris of the grand stand."

LITTLE BITS.

First conductor—"That is a mighty nice man, that new superintendent; he fired McGlinn last night for knocking down, and then thanked him."

Second conductor—"What did he thank him for?"

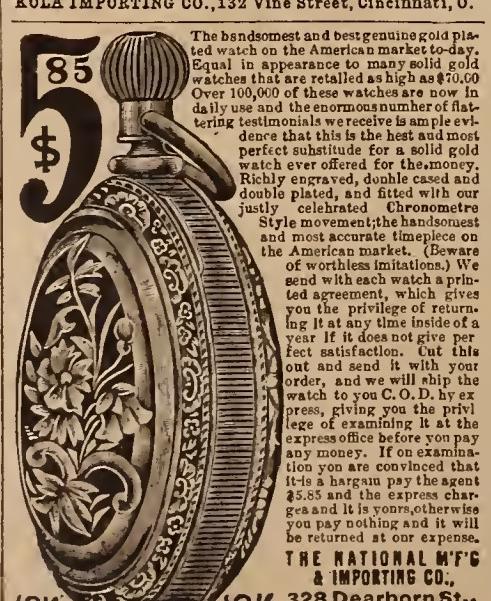
First conductor—"For bringing the car back." —*Midsummer Puck.*

An application for an annual pass was once made to Commodore Vanderbilt by the president of a road about twenty-five miles long.

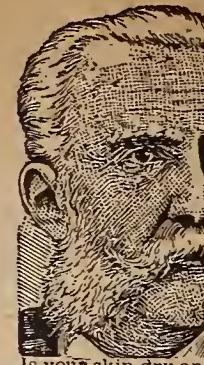
"Your road doesn't seem to cover a great amount of territory," suggested the commodore to the applicant.

"No," said the applicant, "it isn't quite so long as the New York Central, but, by gracious, Mr. Vanderbilt, it's just as wide!" The pass was issued.—*Argonaut.*

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CONTENTS.	Dear heart.	Happy new year.	Petronella.
Alas! those chimes.	De banjo am.	Harp that once.	Smith's hornpipe.
Annie Laurie.	Devil's dream.	Heel-and-toe polka.	Snuff-box waltz.
Arkansas traveller.	Drunken sailor.	Hey, daddy.	Soldier's joy.
Auld lang syne.	Durang's hornpipe.	Highland fling.	Spanish dance.
Basket of loves.	Eight-hand reel.	Home, sweet home.	Speed the plough.
Battle prayer.	Erminie's gavotte.	Hull's victory.	Spirits of France.
Beau of Oak Hill.	Erminie's lullaby.	Imperial, L.	Sun of my soul.
Beaux of Albany.	Fairy dance.	Irishman's heart.	Tempest, The.
Beautiful castle.	Fairy varsovienne.	Jarry trot.	Tempete, La.
Belle Canadienne.	Favorite dance.	Jakie's hornpipe.	There is rest.
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Bonnie Doon.	First love redowa.	John Anderson.	Tired.
Boston dip waltzes.	Boozang's La.	Jordan is a hard.	Uncle Dan'l's.
Cochlearia.	Chained at last.	Kee-row reel.	Uncle Sam's farm.
Chinese march.	Gavotte de Vestris.	Keep the horseshoe.	Up the hills.
Chorus jig.	German, The.	Kendall's hornpipe.	Virginia reel.
College hornpipe.	German redowa.	Kitty O'Neil jig.	Watch on Ithine.
Comin' thro' the rye.	German waltz.	Ladies' triumph.	White cockade.
Corvette.	Gintana waltz.	Lady of the lake.	Widow Macches.
Cuckoo, The.	Girl I left behind.	Lancashire clog.	Wind that shakes.
Cuckoo from Kildare.	Go to the D—.	Land of sweet Erin.	Within a mile.
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Camptown hornpipe.	Don't drink, to-night.	Gorlitz, original.	Somnambula quickstep.
Can you keep a secret?	Douglas' hornpipe.	Haste to the wedding.	Sparkling dewdrop scho.
Carillon de Dunkerque.	Electric light galop.	In time of apple blossoms.	Steamboat quickstep.
Charley over the water.	Fisher's hornpipe.	Irish washerwoman.	'Tis true, we're fading.
Cincinnati hornpipe.	Flowers of Edinburgh.	Jolly dancers medley.	Vinton's hornpipe, No. 1.
Constitution hornpipe.	Fra Diavolo quickstep.	Kathleen Aroon.	Vinton's hornpipe, No. 2.
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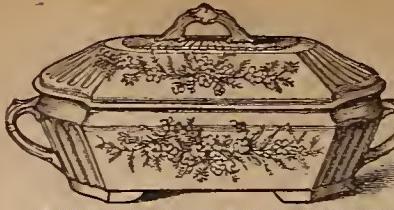
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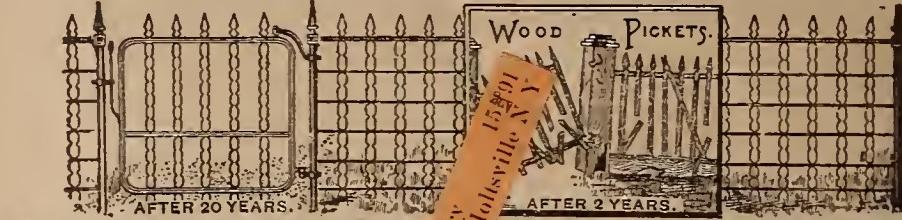
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FARM & FIRESIDE

EASTERN EDITION.

VOL. XIV. NO. 24.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, SEPTEMBER 15, 1891.

TERMS | 50 CENTS A YEAR.
21 NUMBERS.

The Circulation of FARM AND FIRESIDE
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The Average Circulation for the 24 Issues of
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To accommodate advertisers, two editions are printed. The Eastern edition being 100,300 copies, the Western edition being 150,400 copies this issue.

Farm and Fireside has the Largest Subscription List of any Agricultural Journal in the World.

Current Comment.

VOLUME fourteen of FARM AND FIRESIDE is closed with this issue.

The annual index published in this issue is a complete key to the contents of the whole volume, and makes a useful addition to a valuable book of reference. An examination of this index, noting the number and variety of topics treated of, will convince any one that FARM AND FIRESIDE is worth many times the small subscription price asked for it. For the convenience of its advertising patrons this paper is published in two editions, the eastern and the western. The reading matter is the same in each. The advertising matter differs some. Sometimes one edition contains more advertising than the other.

In order to make the same index do for both editions, the articles are all indexed by the department and number of the issue in which they appear, instead of by the page. Beginning with the first of October, the semi-monthly issues are numbered from one to twenty-four, inclusive.

In the following article from *The Forum*, Edward Atkinson points out how the main objections to free silver coinage may be removed:

FREE SILVER COINAGE—WHY NOT?

The government rightly assumes the function of coinage in order to give absolute assurance that each coin contains a certain quantity of gold measured by weight in grains, or a certain quantity of silver measured by weight in grains. A little alloy is added to harden the coin. If people who own silver bullion bring it to the mint and ask to have it coined into pieces of metal named "dollars," why should not the silver be coined into silver dollars? If other people bring gold bullion to the mint and wish to have it coined into dollars or multiples of dollars made of gold, why should the bullion not be coined into gold dollars? There is no reason why as many round pieces of silver called "dollars" should not be stamped by the government as any one wants; there is no reason why as many round pieces of gold called "dollars," or "eagles," or something else, should not be coined as any one wants.

The danger of free coinage is not in the free coinage itself. All that is needed to make free coinage safe, and to enable the mints of the government to supply all the dollars of either kind that any one is willing to buy with bullion, is a slight amendment in the act of legal tender.

The value of gold and silver in the markets of the world is a matter that is wholly without the power of the government to control or to regulate. The value of the silver in the silver dollar has ranged lately from seventy-six to eighty cents in gold. If the law enables any person who has made a bargain to pay dollars, to pay either in silver dollars or in gold dollars, at his own choice, without giving the creditor the same choice, then any one can cheat the man whom he employs or the man

to whom he owes money, by availing himself of a law under which any one to whom dollars are owed is forced to take silver dollars whether he wants them or not, or whether he has agreed to take them or not.

Amend this act so that it shall correspond to the laws and the customs relating to pounds-weight. Bargains are made every day to buy and sell so many pounds of cotton, wool, hides and every other kind of useful goods, except gold and silver bullion. The law says that any man who sells a pound shall deliver a pound avoirdupois of seven thousand grains, unless he has agreed to sell gold or silver bullion. If the bargain relates to bullion, the seller can deliver troy pounds of fifty-seven hundred and sixty grains. But the law does not require the kind of pound to be named in every bargain and sale, either of goods or of bullion. It is not necessary to name the kind of dollar in every bargain or sale. Amend the legal tender act so that any man who has promised to pay simple "dollars" for anything except gold or silver bullion, without any other word describing the kind, shall be under the obligation to pay dollars of gold; but also permit him to make his bargains for any kind of goods in silver dollars, provided he says or names silver; then the free coinage of either kind of dollars will be perfectly safe. All can then have all the dollars that they want, of either kind, that they can afford to pay for. Why not?

There is no international act of legal tender. If any one contracts to buy goods and to pay in pounds sterling in London, he must pay in gold or fail. There is not even any coin named "pound sterling." The coin which corresponds to the weight of gold designated "pound sterling" is called a sovereign; that is its lawful name. Conversely, any man who sells corn, or cotton, or wheat, or beef, on a contract to be paid in pounds sterling, can collect his debt in gold. No act of legal tender can deprive either the purchaser or the seller of his rights.

Gold is the standard of the world's commerce. We cannot cut ourselves away from it if we would, and we would not if we could, because it is the safest and surest standard that we can tie up to. The price of the entire crop of wheat and grain, and of everything else that our farmers produce in excess of our own wants, is fixed at the gold standard by what the surplus will sell for in the home market for export. That price of the surplus establishes the price of the whole crop; no matter what kind of money may be legal tender in the United States—whether it be silver dollars worth eighty cents, depreciated notes or what-not—what the farmer gets is, and always will be, just what his crop is worth in gold.

If the free coinage of silver dollars were authorized without a change in the act of legal tender, there is no class of men who would be so badly cheated, or, in the vernacular, "so badly sold," as the farmers, who are said to want it. The farmers are beginning to find this out, and it will not be very long before those who advocate the free coinage of silver dollars without a change in the legal tender act, will find themselves so feeble in number, and in every other sense, that they will not count for much in either influence or votes.

This may not be the kind of free coinage that the owners of the silver mines want; it may not be the kind of free coinage that men want who desire to pay their debts at a discount. Is it not the only kind of free coinage and the only act of legal tender that any honest man can advocate or sustain?

THAT remarkable federal liquor plank in the platform of the Peoples' party of Ohio, published in our last issue, has been adopted by the Peoples' party in Massachusetts.

The more astounding the proposition the more favor it seems to meet with, in the new party that is now being so deftly manipulated by old professional agitators. The main plank of its platform, the flat money plank, justly entitles it to be named the "green goods" party.

THE September American Agriculturist gives the following exhibit of the great harvest of 1891:

	1891.	1890.	AV.	80-90
Millions of bushels.....	2,000	1,500	1,700	
Average value on farm.....	50c	50.6c	40.2c	
Value (millions of dollars).....	1,000	750	675	

	CORN.	WHEAT.	OATS.
Millions of bushels.....	500	400	445
Average value on farm.....	100c	84c	83c
Value (millions of dollars).....	500	335	368

	GRAND TOTAL.
Millions of bushels.....	3,122
Average value on farm.....	2,424
Value (millions of dollars).....	1,300

Better times are surely at hand for the American farmer. The increased value and supply of agricultural products and live stock may bring our farmers nearly one billion dollars more than they have received of late years. The above summary shows that his three great cereal crops will probably net him \$450,000,000 more than he got for the same crops last year. His receipts will be over \$600,000,000 more than he has received for these crops on the average during the past eleven years. Cotton and rice will command better prices than last season. Cattle are worth one third more than eighteen months since, with other stock in proportion. Tobacco is advancing heavily for cigar leaf; hops are firm at good prices; winter fruit will command large values, and all vegetables are yielding fairly, with every indication of a remunerative market. The export outlook was never better; immensely increased sums will be sent to the United States for our produce. Ulterior influences may, of course, interfere with this brilliant prospect, but the American Agriculturist confesses that it is beginning to share more freely the hopes of certain well-informed but conservative agriculturists, who predict better profits for the farmers of the United States during the next five years than ever before. There will be no return of "war prices," but the money received above expenses will go further and enable the farmer to get more value out of his profits than at any previous period.

SEVERAL months ago, in reporting the condition of winter wheat, FARM AND FIRESIDE said: "The flattering prospects for a large crop of wheat are accompanied by conditions that insure good prices. Harvest will find this country with a very low reserve of old wheat on hand, and even if our next crop comes up to its present promises and turns out to be a very large one, it is most likely that it will all be needed and be taken at good prices. The present outlook is a very favorable one. A big crop of dollar wheat would lift the farmers of this country out of the slough of despond and place them on the solid road to prosperity. Every line of trade and every channel of business would also be benefited."

The highest hopes for a good wheat crop and good prices have been fully realized. A magnificent crop has been harvested in fine condition and is going into market at good prices. The remarkable uniformity of the crop is one of its best features. Money will flow to every part of the wheat-producing area. This wide distribution of the money returns of the crop will give the greatest possible benefit to the people. Europe will need and take all our surpluses, and the whole crop, immense as it is, will bring good prices.

But the most important point for the producers is that a bushel of dollar wheat will buy more now than ever before in the history of the country. About the only thing that need now be feared about future prices is, that speculation may interfere with a steady advance. Every

boom that forces prices above the normal point will check exports and react against us. The course of speculation this year will probably demonstrate the necessity of stringent laws for the suppression of all gambling in futures of all agricultural products.

A RECENT census bulletin contains the following statistics on the value of real and personal property in Ohio:

For three decades, ending in 1880, the estimated true value of all property and the value of real estate and personal property as assessed, including the assessed valuation, as returned in 1890, was as follows:

Years.	Assessed valuation.	Estimated true valuation.
1860.....	\$12,084,569,005	\$16,159,616,068
1870.....	14,178,956,732	30,068,518,507
1880.....	16,902,993,543	43,642,000,000
1890.....	24,249,559,804

From these returns it will be seen that the assessed value of all property has increased from \$16,902,993,543 in 1880 to \$24,249,559,804 in 1890, an increase during the decade of \$7,346,596,261, an amount equivalent to the true value of all property as returned by the U. S. census in 1850 (\$7,135,780,228). Should it be found, upon the completion of the inquiry in relation to the true value of all property in the United States, that the same relation exists in 1890 between assessed valuation and true valuation as existed in 1880, the absolute wealth of the United States, according to the eleventh census, may be estimated as \$62,610,000,000, or nearly \$1,000 per capita, as against \$514 per capita in 1880.

The preliminary statement showing the assessed value of real and personal property of the state of Ohio, is as follows: Total assessed valuation in 1880, \$1,534,360,508; 1890, \$1,778,138,457—an increase of \$243,779,949. The assessed value per capita in 1880 was \$245.71, and in 1890 \$293.50, or an increase of assessed valuation of \$47.59.

THE sale of the surplus of the present crop at fair prices will doubtless greatly stimulate wheat production in this country. The average farmer will attempt to do this by sowing more acres. But the profitable way will be to increase the average yield per acre by better farming, instead of enlarging the area sown to wheat.

The average yield per acre of this year's crop is estimated at fifteen bushels. This is a little more than half the average yield per acre in England. That leaves us a wide margin for greatly increasing our total product without enlarging the area a single acre. Better farming can do it.

By increasing the total yield in this way the cost of producing each bushel will be lowered and the net profits of wheat raising be greatly increased. Let the stimulus given by the present good prices for a bounteous crop be applied to better farming.

THE results of trials for a series of years at the Ohio Experiment Station show that it is not advisable to sow wheat deeper than three inches; that the yield of wheat sown with a roller-press drill is larger than with an ordinary drill; that drilling gives much better yields than broadcasting, and that the best time for sowing wheat on the station farm is the latter part of September or the first of October.

IN the midst of an exciting political campaign, when the interest naturally centers on one or more party questions, Ohio voters should not lose sight of the taxation amendment. It is a measure of great importance. Because it is free from partisan politics it is apt to be neglected, but should not be. Pass that amendment and it will be possible to reform our tax system.

FARM AND FIRESIDE.

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Our Farm.

ON THE OCCURRENCE OF TIN IN CANNED FOODS.

BY H. A. WEBER, PH. D.

THE following investigation of the condition of foods packed in tin cans was prompted by an alleged case of poisoning, which occurred at Mansfield, Ohio, in April, 1890. A man and woman were reported to the writer as having been made sick by eating pumpkin pie, made from canned pumpkin. The attending physician pronounced the case one of lead poisoning. The wholesale dealer, from whose stock the canned pumpkin originally came, procured a portion of the same at the house where the poisoning occurred, and sent it to the writer for examination.

The results of the examination, as reported in serial No. 552 below, showed that the canned pumpkin contained an amount of stannous salts equivalent to 6.4 maximum doses of stannous chloride per pound. On being notified of this fact, the dealer sent a can of the same brand of pumpkin from his stock. The inner coating of the can was found to be badly eroded, and upon examination, as reported in serial No. 563 below, one pound of the pumpkin contained tin salts equivalent to seven maximum and fifty-six minimum doses of stannous chloride.

The unexpected large amount of tin salts in such an insipid article as canned pumpkin, and the claimed ill effects of the consumption of the same, suggested the advisability of extending the investigation to other canned goods in common use. Accordingly, a line of articles was purchased in open market, as sold to consumers, no pains being taken to procure old samples. The collection embraced fruits, vegetables, fish and condensed milk.

With the exception of the condensed milk, every article examined was contaminated with salts of tin. In most cases the amount of tin salts present was so large that there can be no doubt of danger to health from the consumption of the food, especially if several kinds are consumed at the same meal.

METHOD.

The method employed in the determination of the tin was simply as follows:

The contents of each can was emptied into a large porcelain dish, and the condition of the inner coating of the can noted. After thoroughly mixing the contents, fifty grains were weighed off and incinerated in a porcelain dish of suitable size. The residue was treated with a large excess of concentrated hydrochloric

acid, evaporated to dryness, moistened with hydrochloric acid, water added, filtered and washed, the insoluble matter being all washed upon the filter. After drying the filter with its contents, the whole was again incinerated in a porcelain dish and the residue treated as before. The solution thus obtained was properly diluted, and saturated with hydrogen sulfide. On standing about twelve hours in a covered beaker, the precipitate was filtered off, etc., and the tin weighed as stannic oxide.

RESULTS OF EXAMINATION.

SERIAL NO. 552.—Sample of canned pumpkin, received of F. A. Derthick, April 22, 1890. Sent by Albert F. Remy & Co., Mansfield, Ohio. Pie made from it supposed to have made a man and woman sick. The attending physician pronounced the case one of lead poisoning.

Tin dioxide with trace of lead. 0.0424 per cent.
Grains per pound. 2.97 "
Equivalent to stannous chlo. 3.74 "
Minimum doses. 51.4 "
Maximum doses. 6.4 "

SERIAL NO. 563.—Sample of canned pumpkin received of Edward Bethel, June 27, 1890. Labeled, Choice Pie Pumpkin. Packed at Salem, Columbiana county, Ohio, by G. B. McNabb; sent by A. F. Remy & Co., Mansfield, Ohio.

Tin dioxide. 0.0444 per cent.
Grains per pound. 3.11 "
Equivalent to stannous chlo. 3.91 "
Minimum doses. 56. "
Maximum doses. 7. "

CAN ERODED.

SERIAL NO. 565.—Sample of canned pumpkin bought of T. B. Vause, July 11, 1890. Labeled: Belpre Pumpkin Golden. George Dana & Sons, Belpre, Ohio.

Tin dioxide. 0.0054 per cent.
Grains per pound. 0.38 "
Equivalent to stannous chlo. 0.48 "
Minimum doses. 7.7 "
Maximum doses. 1.0 "

CAN ERODED.

SERIAL NO. 566.—Sample of canned Hubbard squash, bought of T. B. Vause, July 11, 1890. Labeled: Ladd Brand. L. Ladd, Adrian, Mich.

Tin dioxide. 0.026 per cent.
Grains per pound. 1.85 "
Equivalent to stannous chlo. 2.33 "
Minimum doses. 37. "
Maximum doses. 4.7 "

CAN BADLY ERODED.

SERIAL NO. 567.—Sample of canned tomatoes, bought of T. B. Vause, July 11, 1890. Labeled: Extra Fine Tomatoes. Blue label. Curtice Bros. Co., Rochester, N. Y.

Tin dioxide. 0.012 per cent.
Grains per pound. 0.84 "
Equivalent to stannous chlo. 1.06 "
Minimum doses. 16.00 "
Maximum doses. 2.00 "

INNER COATING ERODED.

SERIAL NO. 568.—Sample of canned tomatoes, bought of T. B. Vause, July 11, 1890. Labeled: Fresh Tomatoes. Curtice Bros. Co., Rochester, N. Y.

Tin dioxide. 0.014 percent.
Grains per pound. 0.98 "
Equivalent to stannous chlo. 1.23 "
Minimum doses. 19.0 "
Maximum doses. 2.5 "

CAN ERODED.

SERIAL NO. 569.—Sample of canned peas, bought of T. B. Vause, July 11, 1890. Labeled: Petite Pois. P. Emillien, Bordeaux.

Copper oxide. 0.0294 per cent.
Grains per pound. 2.06 "
Equivalent to copper sulphate. 3.95 "
Tin dioxide. 0.0068 "
Grains per pound. 0.48 "

Equivalent to stannous chlo. 0.60 "
Minimum doses. 9.6 "
Maximum doses. 1.2 "

NO VISIBLE EROSION.

SERIAL NO. 570.—Sample of canned mushroom, bought of T. B. Vause, July 11, 1890. Labeled: Champignons de choix. Boston Fils, Paris.

Tin dioxide. 0.020 percent.
Grains per pound. 1.40 "
Equivalent to stannous chlo. 1.76 "
Minimum doses. 28. "
Maximum doses. 3.5 "

INNER COATING HIGHLY DISCOLORED.

SERIAL NO. 571.—Sample of canned blackberries, bought of T. B. Vause, July 11, 1890. Labeled: Lawton Blackberries. Curtice Bros. Co., Rochester, N. Y.

Tin dioxide. 0.0114 per cent.
Grains per pound. 0.80 "
Equivalent to stannous chlo. 1.01 "
Minimum doses. 16. "
Maximum doses. 2. "

INNER COATING ERODED.

SERIAL NO. 572.—Sample of canned blueberries, bought of T. B. Vause, July 11, 1890. Labeled: Blue Berries. Eagle Brand. Packed by A. & R. Loggie, Black Brook, N. B.

Tin dioxide. 0.03 percent.
Grains per pound. 2.10 "
Equivalent to stannous chlo. 2.64 "
Minimum doses. 42. "
Maximum doses. 5.3 "

CAN BADLY ERODED.

SERIAL NO. 574.—Sample of canned salmon, bought of T. B. Vause, July 11, 1890. Labeled: Best Fresh Columbia River Salmon. Eagle Canning Co., Astoria, Clatsop County, Oregon.

Tin dioxide. 0.0134 per cent.
Grains per pound. 0.94 "
Equivalent to stannous chlo. 1.18 "
Minimum doses. 18.9 "
Maximum doses. 2.3 "

INNER COATING ERODED.

SERIAL NO. 578.—Sample of canned pears, received of Edward Bethel, July 29, 1890. Labeled: Bartlett Pears. Solan's Brand. Packed in Solano county, Cal.

Juice. Frnit.
Tin dioxide. 0.0074 pr ct. 0.0074 pr ct.
Grains per pound. 0.518 " 0.518 "
Equivalent to stan-
nous chlo. 0.65 " 0.65 "
Minimum doses. 10.4 " 10.4 "
Maximum doses. 1.3 " 1.3 "

CAN ERODED.

SERIAL NO. 579.—Sample of canned peaches, received of Edward Bethel, July 29, 1890. Labeled: Peaches. Wm. Maxwell, Baltimore, U. S. A.

Juice. Fruit.
Tin dioxide. 0.0324 pr ct. 0.0414 pr ct.
Grains per pound. 2.268 " 2.989 "
Equivalent to stan-
nous chlo. 2.85 " 3.65 "
Minimum doses. 45.6 " 58.4 "
Maximum doses. 5.7 " 7.3 "

CAN ERODED.

SERIAL NO. 580.—Sample of canned blackberries, received of Edward Bethel, July 29, 1890. Labeled: Blackberries. Clipper Brand. Wm. Munson & Sons, Baltimore, Md.

Tin dioxide. 0.060 percent.
Grains per pound. 4.2 "
Equivalent to stannous chlo. 5.28 "
Minimum doses. 84. "
Maximum doses. 10.6 "

CAN BADLY ERODED.

SERIAL NO. 581.—Sample of canned cherries, received of Edward Bethel, July 29, 1890. Labeled: Red Cherries. Cloverdale Brand. G. C. Mournaw & Co., Cloverdale, Va.

Tin dioxide. 0.0414 per cent.
Grains per pound. 2.898 "
Equivalent to stannous chlo. 3.65 "
Minimum doses. 58.4 "
Maximum doses. 7.3 "

CAN BADLY ERODED.

SERIAL NO. 582.—Sample of canned pumpkin, received of Edward Bethel, July 29, 1890. Labeled: Royal Pumpkin. Urbana Canning Co., Urbana, Ohio.

Tin dioxide. 0.0184 per cent.
Grains per pound. 1.299 "
Equivalent to stannous chlo. 1.62 "
Minimum doses. 25.9 "
Maximum doses. 3.2 "

CAN ERODED.

SERIAL NO. 583.—Sample of canned baked sweet potatoes, received of Edward Bethel, July 29, 1890. Labeled: Tennessee Baked Sweet Potatoes. Capital Canning Co., Nashville, Tenn.

Tin dioxide. 0.0132 per cent.
Grains per pound. 0.92 "
Equivalent to stannous chlo. 1.16 "
Minimum doses. 18.5 "
Maximum doses. 2.3 "

CAN ERODED.

SERIAL NO. 584.—Sample of canned peas, received of Edward Bethel, July 29, 1890. Labeled: Marrowfat Peas. Parson Bros., Aberdeen, Md.

Tin dioxide. 0.0044 percent.
Grains per pound. 0.30 "
Equivalent to stannous chlo. 0.38 "
Minimum doses. 6.2 "
Maximum doses. 0.8 "

CAN SLIGHTLY ERODED.

SERIAL NO. 585.—Sample of string beans, received of Edward Bethel, July 29, 1890. Labeled: String Beans. Packed by H. P. Hemingway & Co., Baltimore, Md.

Tin dioxide. 0.0154 per cent.
Grains per pound. 1.08 "
Equivalent to stannous chlo. 1.36 "
Minimum doses. 21.7 "
Maximum doses. 2.7 "

CAN ERODED.

SERIAL NO. 586.—Sample of canned salmon, received of Edward Bethel, July 29, 1890. Labeled: Puget Sound Fresh Salmon. Puget Sound Salmon Co., W. T.

Tin dioxide. 0.0044 per cent.
Grains per pound. 0.30 "
Equivalent to stannous chlo. 0.38 "
Minimum doses. 6.2 "
Maximum doses. 0.8 "

CAN SLIGHTLY ERODED.

SERIAL NO. 587.—Sample of condensed milk, received of Edward Bethel, July 29, 1890. Labeled: Borden's Condensed Milk. The Gail Borden Eagle Brand. New York Condensed Milk Co., 71 Hudson St., New York.

Tin dioxide. None.
No visible erosion.

SERIAL NO. 592.—Sample of canned pineapples, bought of Mr. Brown, Fifth avenue, August 4, 1890. Labeled: Pineapples, First Quality. Packed by Martin, Wagner & Co., Baltimore, Md.

Tin dioxide. 0.0098 per cent.
Grains per pound. 0.686 "
Equivalent to stannous chlo. 0.864 "
Minimum doses. 13.6 "
Maximum doses. 1.7 "

CAN ERODED.

SERIAL NO. 593.—Sample of canned pineapples, bought of Mr. Brown, Fifth avenue, August 4, 1890. Labeled: Florida Pineapple, Oval Brand, Extra Quality. A. Booth Packing Co., Baltimore, Md.

Tin dioxide. 0.0158 per cent.
Grains per pound. 1.11 "
Equivalent to stannous chlo. 1.4 "
Minimum doses. 22.4 "
Maximum doses. 2.8 "

CAN ERODED.

Ohio State University. H. A. WEBER.

COMMENTS ON STATION BULLETINS.

BY JOSEPH (T. GREINER.)

BUYING CONCENTRATED FERTILIZERS.—The New Jersey station deserves credit for its intelligent efforts to shed a clear light over many of the mysterious points concerning the so-called commercial fertilizers and their use. One of the problems before us is the question whether we should buy our fertilizers ready mixed from some of the leading dealers, or whether it be cheaper, and entirely safe, to buy the raw materials separately and mix them at home. Bulletin 18 of the New Jersey Experiment Station treats quite fully on this question, and recommends the purchase of the separate raw materials. The station has made some mixtures, after approved formulas, from raw materials purchased in the open market. To show the nature of these mixtures, I will quote a few of the formulas; namely:

No. 3,960. For general crops:

Nitrate of soda.....	200 pounds.
Sulphate of ammonia.....	200 "
Peter Cooper's bone.....	400 "
Bone-black superphosphate.....	400 "
S. C. rock.....	600 "
Muriate of potash.....	200 "

saving to be ignored, and yet it is due more to the method of buying than to anything else. The brands sent out by our leading manufacturers are good, because composed of the best forms of plant food, and would give as good results as home mixtures made according to same formulas. Their cost, however, includes, in addition to expenses of mixing and bagging, commissions of dealers and *credits*, which latter is equivalent to an excessive rate of interest. If reliable manufacturers would make a discount for cash orders equivalent to the usual credit and commissions, the financial saving due to home mixing would be reduced to differences in cost of mixing and bagging.

The use of home mixtures gives us another advantage. We can leave out any ingredients which the soil is supposed to contain already in sufficient supply. If we think, or are reasonably sure, for instance, that our soil contains potash enough, we can simply leave the potash out of our home mixture, and thus reduce the cost of the application. It has been fully demonstrated that on certain soils and for certain crops the application, at the right time, of materials furnishing but one or two fertilizing elements, proves more profitable than the best or cheapest complete fertilizers. To secure the greatest advantages from the use of fertilizers, the bulletin says, it is necessary (1) to know that the chief elements of direct plant food are nitrogen, phosphoric acid and potash; (2) to learn how and where to buy them in the best forms; and (3) to study the special requirements of the soil for them. Points 1 and 2 are comparatively easy and simple; point 3 is where the trouble comes in. In a series of articles which appeared in FARM AND FIRESIDE some time ago (as some of the readers probably recollect) I have given some suggestions intended to guide the manure user to a proper understanding of these complicated points.

LETTUCE AND CUCUMBER DISEASES.—Mr. Jas. Ellis Humphrey, professor of vegetable pathology at the Massachusetts Agricultural Experiment Station, reports in Bulletin No. 40 the results of his investigations concerning the rotting of lettuce in greenhouses, and the powdery mildew of the cucumber. The lettuce rot usually appears first just above the surface of the soil at the attachment of the

lower leaves to the stem, and then spreads to the center of the head, causing the stem and the bases of the lower leaves, and later the whole of the tender inner leaves, to become decomposed into a slimy mass. This disease is due to a kind of fungus, easily kept alive and carried over from one crop to the succeeding one. The only treatment suggested is the removal of all sources of infection. All affected plants should at once be taken up wholly and destroyed by burning. All dead leaves or other refuse should be often scrupulously cleaned up and burned so that no breeding places may be left for the fungus. A house which has been very badly infested by the disease should be thoroughly cleaned, whitewashed or painted, and supplied with fresh soil before a new season's operations are begun.

The powdery mildew of the cucumber is also due to the work of a fungus. It attacks the leaves, on the upper surfaces of which it forms at first rounded spots, which appear like blotches of a white powder. These spots gradually enlarge and become confluent until the leaf is practically covered. The attacked parts of the leaf soon turn yellow, and finally become dead and dry. Under favorable circumstances the disease spreads quite rapidly and is very destructive. Prof. Bailey and Dr. Fisher have found that the

fungus may be kept in check by frequent spraying with a solution of liver of sulphur (sulphide of potassium) in water. An ounce of the drug to three gallons of water is strong enough, and will not injure the foliage. A house in which this disease has been troublesome should be thoroughly cleaned and fumigated before the next season's crop is started.

THE ROSE-CHAFER OR ROSE-BUG.—The joy of the people living in New Jersey and other districts where the rose-chafer often destroys almost every green thing, over the alleged sure remedy for the pest, discovered by Mr. Carman, of the *Rural New-Yorker*; namely, hot water, was destined to be of short duration, for it now proves to have been decidedly premature. Water heated to 125° or above, it is true, is sure and almost instant death to every rose-chafer deluged with it or immersed in it. But as yet there are no practical means found to make the application in the wholesale manner required in the badly infested districts. Mr. John B. Smith, the entomologist of the New Jersey Agricultural Experiment Station, according to his report in Bulletin 82, has tried his best to overcome the mechanical difficulties, but all in vain. He could not succeed in getting a spray hot enough to kill at a distance of twelve inches. Even where the water was above 160°, and the

a single wire, and he went along rapidly, holding the umbrella under the wire, and tapping it above hard enough to induce the beetles to drop. They were readily shaken into the crown, and dropped through into the bag. Loosening the string at the bottom, the bag can be emptied into kerosene or hot water. To get rid of the troublesome pests will be worth some thought and study, and considerable effort. After awhile more convenient and more effective remedies will be found, I trust.

DOMESTIC FERTILIZERS.

One great source of loss or profit on a farm is the manner in which the manure is disposed of. The prudent farmer takes pains in the making, saving and applying of all the available materials for increasing the fertility of his fields, and is generously rewarded for his trouble by the increasing richness of his soils and the harvesting of satisfactory crops. On the other hand, the shiftless farmer permits barn-yard or stable manure to accumulate until it actually becomes a nuisance to the place. He continues to take from the soil all that he can obtain, without considering the question of making a fair return in fertilizing materials. In course of time, through this exhausting treatment, the available plant food is con-

sumed. The soil has been robbed, and no matter how generously tilled, will not again yield such bountiful harvests until, by judicious applications of manure in some shape or form, the fertility is in some measure restored.

It is generally preferable to draw the manure from the stables directly to the fields during the winter, as it is made, and there evenly spread over the surface of the field, that the rain and melting snow may convey the nutritious elements down into the soil. Otherwise, where the manure is first taken to the open barn-yard, there to lie and leach in open exposure to rain, snow and sunshine, much of the most valued soluble parts are lost, while another handling is necessary before the remaining portions can be placed on the field where wanted. Here, then, is an unnecessary loss of both labor and material. Should, however, the fields be inclined to wash, it would not be advisable to draw out the manure on frozen ground. The only safe plan under such circumstances is to provide a manure shed or covered barn-yard.

Thousands of dollars are annually paid out for commercial fertilizers that might be devoted to other purposes did the farmers but make a judicious use of the fertilizers to be obtained on the ordinary farm, and which frequently, to a more or less extent, are permitted to go to waste.

Where the barn-yard manure is sufficiently decomposed to fit it for application to spring crops, it, too, should be drawn out to the fields. But it frequently occurs that much of the straw and fodder will be in too coarse a condition. However, if the fodder be cut, and a few hogs be given the run of the yard and permitted to go without rings, the greater portion of the manure may be fit for spring application.

Much has been recently written concerning the value of linseed meal as a manure when fed to milch cows. As we made use of a large quantity of this meal last winter, an experiment was made with the

manure in application to various spring crops, and notwithstanding the unfavorableness of a portion of the season, present indications point to a realization of all expectations. The actual results, however, must remain to be told in another letter. If the manurial value of the meal be one half of what has been claimed for it, this, added to its feeding value, will most assuredly make it well worth the prices demanded for it, even in such stringent seasons as last winter. JOHN L. SHAWVER.

BREADSTUFFS — WORLD'S SUPPLY AND DEMAND.

C. Wood Davis, the noted statistician and writer, states that during the last ten years the wheat and rye area of the world has only increased 1.4 per cent, as against an increase in the number of bread-eaters of 14 per cent, the ratio being as one in ten. He also shows that the world's deficit of wheat and rye for 1891, as compared with the average annual product of the world, is 616,000,000 bushels, with no reserves of old crops to draw upon, and unless drafts of

many hundreds of millions of bushels are made upon our corn-cribs, vast numbers of the people of Europe must die of starvation before the ingathering of the harvest of 1892, as but three countries of Europe have, possibly, grown food enough to subsist their population during the coming year; and these are Hungary and the unimportant Bulgaria and Roumania.—*Kansas Farmer*.

Giving the cows a little grain at night, when they come to the barn, makes it a very sure thing that they will be at the pasture bars all ready to come home at the usual time, and it increases the quantity and improves the quality of the milk at small cost.

A Life Saved

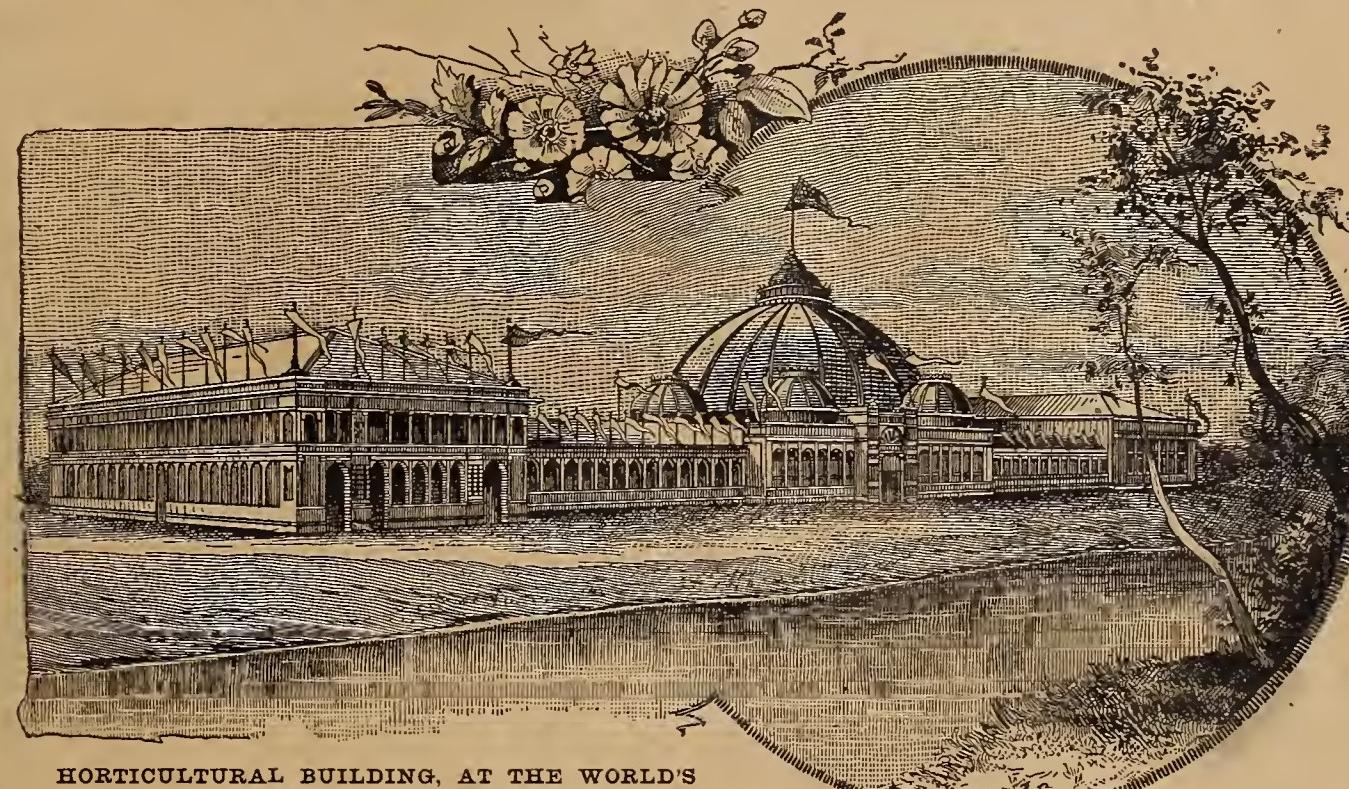
Mr. Geo. Raymond, of Seneca Falls, N. Y., is a pump setter in the employ of Ramsay & Co., the well known pump makers of that place. He is a member of Ramsay Engine Co. He says:

"SENECA FALLS, July 30, 1891.

"My wife, without doubt, owes her life to Hood's Sarsaparilla. A few years ago she was at death's door, due to blood poisoning, or, as physicians say, pyæmia. After everything else failed, Hood's Sarsaparilla brought her out of the crisis all right. Since then she has suffered at times with numbness and headache, but continues taking

Hood's Sarsaparilla

and is gradually getting over these troubles. She clings to Hood's, takes nothing else, and we believe it will effect a complete cure."



HORTICULTURAL BUILDING, AT THE WORLD'S COLUMBIAN EXPOSITION, CHICAGO, 1893.

The accompanying cut presents the front elevation of the Horticultural hall, designed by W. L. B. Jenney, of Chicago. The building is situated immediately south of the entrance to Jackson Park from the Midway Plaisance, and faces east on the lagoon. In front is a flower terrace for outside exhibits, including tanks for *Nymphaeas* and the *Victoria regia*. The front of the terrace, with its low parapet between large vases, borders the water, and at its center forms a boat landing. The building is 1,000 feet long, with an extreme width of 286 feet. The plan is a central pavilion with two end pavilions, each connected to the center pavilion by front and rear curtains, forming two interior courts, each 88 by 270 feet. These courts are beautifully decorated in color and planted with ornamental shrubs and flowers. The center pavilion is roofed by a crystal dome 187 feet in diameter and 113 feet high, under which will be exhibited the tallest palms, bamboos and tree ferns that can be procured. There is a gallery in each of the pavilions. The galleries of the end pavilions are designed for cafes, the situation and surroundings being particularly well adapted to recreation and refreshment. These cafes are surrounded by an arcade on three sides, from which charming views of the ground may be obtained. In this building will be exhibited all the varieties of flowers, plants, vines, seeds, horticultural implements, etc. Those exhibits requiring sunshine and light will be shown in the rear curtains, where the roof is entirely of glass and not too far removed from the plants. The front curtains and under the galleries are designed for exhibits that require only the ordinary amount of light. Provision is made to heat such parts as require it. The exterior of the building is in staff or stucco, tinted a soft, warm buff, color being reserved for the interior and the courts. The appropriation for this building is \$400,000. It will probably be built for something less than this sum.

application a mere splashing from the pail, it lost heat so rapidly that, though the drops seemed scalding to the hand, yet when the wet leaf at the same distance was touched just after application, it felt cool. Prof. Smith has also put almost all known insecticides and poisonous substances to a thorough test against the rose-chafer, but the latter has thus far remained master of the field.

Mr. A. S. Fuller, of New Jersey, suggests the use of "counter-attractants." He says: "The rose-beetle does not trouble my grapes when in flower, although they appear in my garden by the millions, simply because I supply them with food they like better—namely, the flowers of several species of *Spiraea*. I do not think I have lost ten pounds of grapes in twenty years from their depredations." Blackberry plants are also special favorites of the beetles, and thus the outsides of vineyards can frequently be defended by a few rows of blackberries. They bloom just at the right time, and would be likely to arrest incoming crowds of beetles. If they are collected from these plants each day, injury to the vineyard may be averted in whole or in part." To collect the rose-chafers from vines and other plants, Prof. Smith used a modification of the "entomologist's umbrella." He cut out the crown and sewed to it a bag, closed by a string at the bottom. The vines were on

summed. The soil has been robbed, and no matter how generously tilled, will not again yield such bountiful harvests until, by judicious applications of manure in some shape or form, the fertility is in some measure restored.

It is generally preferable to draw the manure from the stables directly to the fields during the winter, as it is made, and there evenly spread over the surface of the field, that the rain and melting snow may convey the nutritious elements down into the soil. Otherwise, where the manure is first taken to the open barn-yard, there to lie and leach in open exposure to rain, snow and sunshine, much of the most valued soluble parts are lost, while another handling is necessary before the remaining portions can be placed on the field where wanted. Here, then, is an unnecessary loss of both labor and material. Should, however, the fields be inclined to wash, it would not be advisable to draw out the manure on frozen ground.

The only safe plan under such circumstances is to provide a manure shed or covered barn-yard.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

AHE ONION SITUATION.—According to all the information at my command, the onion crop of the country is about an average, no more nor less. In some sections the acreage is rather smaller than usual, but the yield is larger. At the East, perhaps, there will be more onions produced than in an average season, but this excess is offset by a shortage further west. The country at large will have the usual amount of onion flavor. In this vicinity there is at present no oversupply, but the main crop is not yet ready for market. I marketed a few bushels thus far, receiving one dollar per bushel. If my whole crop were ready now, I would rush them to market without delay, for undoubtedly they will soon get cheaper when the main crop comes in; but we may reasonably expect them to rise to that figure, and perhaps upwards again, after November. Growers should beware of bringing the bulk of the crop to market all at a time, thus creating a glut and demoralizing the markets.

The papers last spring contained the advertisement of an eastern seedsman, in which he offered a premium of \$100 for the largest yield obtained from one ounce of seed of a new onion, called "Large, Yellow Puget Sound," if my memory serves me right. Of course, I gave it a trial on an ounce scale, treating it by my new method, and setting the plants alongside of White Victoria (Burpee) and Prizetaker (Maule). The onion is on the Yellow Dutch order, very good, although nothing

may serve as a framework. No other description will be needed. I think I would divide the storage-rooms on each side into shelves, making at least four of them, each two feet deep. The onions can then be stored twelve to eighteen inches deep, leaving space enough for free airing and drying between the layers. The loft may also be used for curing onions, or for storing corn and for other purposes.

If we could depend on dry weather right along, we might easily dispense with a curing-shed, lofts, etc., as the bulbs will cure very well outdoors. In a dry spell we can even leave the crop unharvested for some time after it is ready for pulling. But this is not a safe way. Many onions are lost or much deteriorated in value by being left unharvested too long. When the bulbs have made their growth, the tops fall over, and gradually begin to waste away. Then is the time to pull the crop. If left, and a wet time should set in, the onions will take a new start, and after having once begun to grow a second time, nothing we might do will stop them again. They will keep on growing, and if not used soon, will spoil. The same thing is liable to happen if the onions are left on the ground to cure, and a long spell of rainy weather sets in. Usually we run very little risk early in the season, as a few days of hot, dry weather will be all-sufficient to finish the curing process and get the bulbs in marketable condition. Later in the season, when rains are usually more frequent and the sun has lost much of its drying power, we must be more careful with the crop. Pull in time, leave on the ground for a few days; then, on a dry day, gather and put into a curing-crib, or thinly on a barn or shed floor or loft, or in any other dry and airy place.

• WINTER STORAGE OF ONIONS.—Only

pulled up most of these hybrid plants as soon as I recognized them as such, but shall leave a few just to see the final outcome. The fruit of these hybrids will be worthless; this is sure enough, too sweet for a cucumber, too much cucumber for a melon.

THE FREEMAN POTATO.—This was introduced last year at \$3 per pound, an enormous price. I had given it a favorable certificate, and naturally feel somewhat responsible for its good behavior. Am yet favorably impressed with it—undoubtedly it is a good early variety. We should be able to decide on its true standing this year, and I am quite anxious to hear the reports, favorable or otherwise, of those who have tried it. I am also anxious to get a few true seeds (from seed balls) of this variety. I have not seen a seed ball in any potato field in this vicinity this year.

Orchard and Small Fruits.
CONDUCTED BY SAMUEL B. GREEN.

SOME NOTES ON THE INSECTS OF THE SEASON.

Last year I discovered the destructive bud-worm at work in my apple orchard, and notified the state entomologist. By commencing when the buds were dormant and spraying up to the time the petals parted, I succeeded in doing away with them. The codling-moth and tent-caterpillar were easily vanquished at the same time.

I have had a hard fight with the pear-tree louse, called the Psylla. It was noticed in 1850 by Mr. E. J. Gennet, of Greenbush, N. Y., who wrote as follows in regard to it to the Albany *Cultivator*: "At or before summer, in absence of dew for several nights, I observed drops falling from the trees, which were found to proceed from minute aphides, thickly covering the buds. The varnish these insects exude is regarded as poisonous to the trees." This is the pear Psylla that nearly destroyed the crop along the Hudson last year. It is a scourge to pear-growing. It kills the next year's buds and weakens all the under branches, so that the trees are apt to die the next season. (For remedy see column of questions and answers.—Ed.)

The pear-midge lays eggs in the blossom end of the pear, early in the season. The eggs hatch and the young pear becomes filled with maggots, which cause the green fruit to fall off.

These three insects are very injurious. The codling-moth and tent-caterpillar are nothing as compared with them.

I have sprayed 15,000 gallons of insecticides this season, and expect a crop of from 1,500 to 1,800 barrels of apples. I use a sprayer that pumps by horse-power, and could not do without it.

I find the formulas generally recommended by the department of agriculture, and various state entomologists, are too strong and not safe to use. When kerosene is used in emulsion, it should not be stronger than 3 gallons of kerosene to 150 gallons of water; 1 gallon of kerosene to 15 of water is much too strong. Eau celeste, made of 2 pounds of sulphate of copper, 2½ pounds of sal soda, 1½ pints of ammonia, I have known to destroy foliage, when diluted with 75 and 100 gallons of water, instead of with 22 gallons, as usually recommended.

CURING PLUMS FROM CURCULIO.

A correspondent writes that plums may be saved from the curculio by putting a piece of cotton batting around the tree and saturating it with turpentine, once in a week or two.

If he would study the habits of the curculio he would see that such a remedy would be ineffectual and useless. Since the curculio generally flies up into the trees, anything around the trunk could not hinder its ascent. A similar remedy to his is used for the canker-worm, but the female of that insect is wingless, and may be prevented from ascending the trees by a band of paper covered with printers' ink.

LOW RATE HARVEST EXCURSIONS.

The Missouri Pacific Railway and Iron Mountain Route will run a series of low rate, Harvest Excursions to Southwest Missouri, Kansas, Arkansas, Texas and all points West and Southwest, September 15th and 29th. Tickets good for thirty days to return with stop-over privileges for the inspection of land. Further information furnished by N. R. Warwick, Agent, 131 Vine St., Cincinnati, Ohio, or H. C. Townsend, General Passenger and Ticket Agent, St. Louis, Mo.

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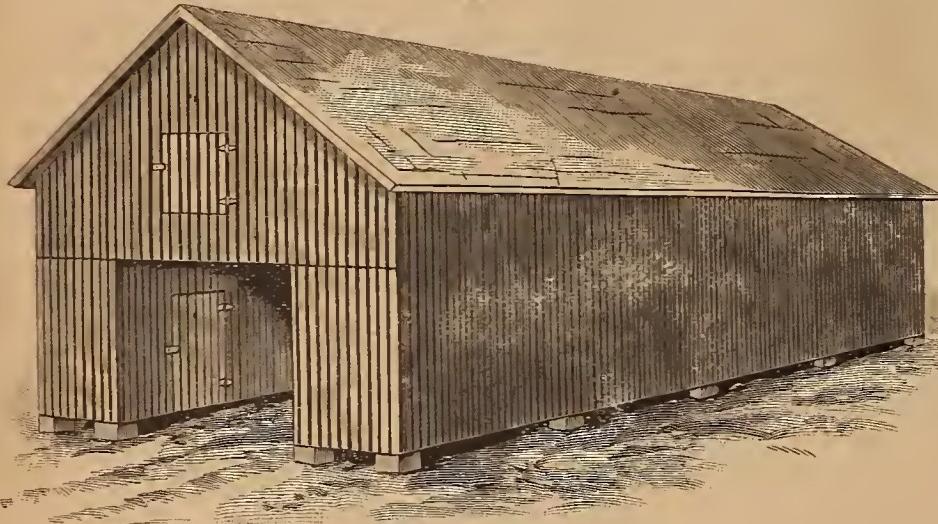
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ONION CURING SHED OR CRIB.

remarkable, and yielded about one half as much as the White Victoria, and one third as much as the Prizetaker—on the whole, a pretty fair yield, according to our older notions of onion growing. On the other hand, however, the new Large, Yellow Puget Sound could have been marketed a week or two ago, while Prizetaker, White Victoria, Spanish King and even White Globe, all planted at the same time, will not be in condition for sale in a week. The former brings me \$1 per bushel, which is probably much more than can be obtained for onions of the same quality in September and October. I have an idea that it will pay the grower who plants Danvers, or any other of the old standard sorts, to treat at least part of his crop on the system, named by me the "New Onion Culture," for the reason that this part of the crop can be marketed several weeks in advance of the main crop, and at a time when the markets are not yet well supplied. It also seems to me that this new system opens up a way of profitable onion growing for people in the southern states. In June, July and part of August onions usually bring a good price in northern markets.

ONION CURING-CRIB.—Henry Price, of Hardin county, Ohio, has just completed a shed or crib for curing his onion crop. He describes it as "in reality, only a double corn-crib." It is sixteen feet wide and eighty long, with an eight-foot driveway in the center, the whole length. This leaves the width of crib on each side four feet; its height, eight feet. The building is lathed all around, inside and outside, similar to a corn-crib. Of course, it can be put up to suit the notions of the person building it, and quite cheaply, if desired. Ordinary rough posts, cut in the woods, set into the ground three or four feet deep,

bulbs that are perfectly cured in accordance with the hints above given, are fit for winter or spring use. Never attempt to keep onions that are not capped over perfectly, and are not entirely dormant, both at top and root part. If they are thus perfect, it will not be a hard task to keep them over winter, provided we have a dry, cool and airy room, where we can keep them from freezing. Never store them in a large bulk together. Onions will also keep quite well when frozen. Store on the floor of some outbuilding, say fifteen inches deep, and as far away from the wall. When frozen, cover with a two-foot layer of hay; but do not handle them.

DO VINES MIX?—I have just had what I might call a new experience. Last season my Emerald Gem melons grew adjoining a patch of cucumbers. As there was no other melon variety near, I felt reasonably safe in gathering seed of some of the finest Emerald Gem specimens and planting this year. The crop last year did not contain a single specimen but that had all the striking characteristics of the Emerald Gem in form, color, in parting from the stem when ripe, and especially in its exquisite flavor. Surely there was no immediate influence of the cucumber contamination. This season, however, I find quite a sprinkling of cucumber-melon hybrids among my Emerald Gems. It is the first time I ever found such hybrids (leaving the much-advertised mango-melon, or vegetable orange, which is undoubtedly a hybrid between cucumber and melon, and as worthless as anything can be, to my notion, out of consideration), although I have planted seed gathered from melon of my own growing, produced in a garden where a large number of cucurbits of all sorts were growing in closest proximity, year after year. I have

nothing to do with the hybrids, but I have

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INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Aphides on Gooseberry Bushes.—S. R., Houlton, Me. Your gooseberry bushes are troubled with an aphid. The best remedy is to cut off all the infested parts as soon as they develop, and burn them; also use kerosene emulsion as soon as you see the lice on the bushes. The curl and bunching of the leaves results from the irritation set up by the insects.

Walnut and Butternut.—W. C. N., East Grand Forks, Minn. The black walnut is rather beyond its normal belt, so far north as you live; the butternut is much more hardy. I think they have done well to fruit at all. They will undoubtedly fruit if they continue to live. The flowers are monocious; that is, each plant bears two kinds of flowers (both pistillate and staminate kinds). It would be well not to prune very much, but allow the trees to branch quite low down. By this method the trees will have the branches to furnish protection against cold and sun-scald.

Rust on Raspberry.—Mrs. A. C., Boltonville, Wis. The disease you refer to is a rust, and there is no known remedy for it. As a matter of prevention, all the diseased plants should be destroyed, and if you put out a new lot of plants put them on new land away from the diseased piece, and keep the diseased plants destroyed. Do not ever let the diseased plants produce any red rust (spores), for by it the disease is spread, but destroy the plants as soon as they begin to look sickly. By destroying, I mean burning them up or burying them deeply, where they will not be disturbed.

Burning off Strawberry Beds.—I. M. N., Kennard, Ohio, asks: "After burning off an old strawberry bed, will the plants sprout up and be the same as a new patch? When would be the best time to do it? Is it to be covered with mulch again?"

Yes; they do not seem to be injured by the slight heating up of the surface soil. They are not so good as new plants, but this is the best way of treating an old bed that is to be kept over, but the plants should be thinned out as soon as they start, and must be heavily manured. (See reply to W. H. C., of Florida.) It should be done as soon as the fruit is gathered. There is no need of mulching the bed, but it should be faithfully cultivated.

Insects on Pear-trees.—F. S., Catskill, N. Y. The Psylla, which you find injuring your pear-trees, is very difficult to destroy, on account of the protecting material surrounding it. It is also a very dangerous insect on pear-trees. The eminent entomologist, Dr. Otto Sugger, recommends a kerosene emulsion made by using whale-oil soap, instead of common soap, and about half as much of kerosene as is generally recommended. The flies which you mention, as following the "lice," are probably the mature insect, which has wings. Early spraying of the fruit with Paris green should do away with the pear midge, or maggot. The fruit infested with the maggots should also be destroyed.

Peach-borer.—J. B., Batavia, Ill., writes: "(1) Is the peach-borer a common pest now? (2) What is the best remedy for the peach-borer?"

(1) Yes; it is very destructive when peach orchards are neglected. (2) The best remedy is probably the following: Go over the trees once in the spring and once in early summer, and remove the borers with a knife. As a prevention, heap around each tree a small amount of coal ashes or soil in the spring, allowing it to remain until autumn. Incasing the trees in paper is sometimes practiced. A wash is sometimes used, made of plaster of Paris, Paris green, soap and a little carbolic acid. A thin wash is made of plaster of Paris and the other ingredients are added according to the judgment of the operator.

Strawberries.—A. A. B., Broad Run, Md., writes: "(1) I would like to know the best variety to raise for market. (2) Also the best way to plant and cultivate. (3) What kind of land would be the best, strong land or not?"

(1) As for the best varieties for you to plant, it would be well to inquire in your neighborhood as to what kinds do best there. If you have no such data to go by, I think you had better plant Warfield No. 2 and Haverland. But both of these are pistillate and must have some kind to produce pollen. For this purpose plant every third row of either Michel's Early or Jessie; I prefer the first. (2) For market use plant three and a half by two feet. Have the rows straight and cultivate both ways, until the first of August, after which cultivate only the wide way, and allow the runners to root in the rows. By cultivating both ways a great amount of hard labor is saved in hoeing. All the runners that start after the rows are full of well-rooted plants, should be cut off. Keep the cultivator going all the season. The bed should have a covering of corn stalks, or some other material free from weed seeds, as soon as the ground is froz-

en hard enough to bear up a team. This should not be removed until the plants start in the spring, and should then be drawn into the rows to keep the fruit clean. (3) The land cannot be too rich, but for early fruit should be a well-drained, open, rich sandy loam, that has been cultivated at least two years. Any easily-worked soil will grow strawberries, if well drained.

Pruning Grape-vines.—Mrs. A. A. S., Chester, Vt. You should always prune with a view to saving good, strong canes for next year, so you must save some of the strong-growing canes. On the fruiting canes it is a good plan to pinch back the tip when it is two joints beyond the fruit. The long canes, too, should be pruned a little, by cutting off their tips. By this means, the strong, fruitful buds will be formed lower down than if not pruned. It is never a good plan to take off much foliage at one time when the plant is growing rapidly for by so doing the plant is checked in the growth; it is like taking a part of the machinery out of a mill. I would almost as soon some man would mutilate the roots as the tops of my grape-vines.

To Keep Mice from Apple-trees.—W. J. J., Ottawa. Prepare for winter by throwing a few spadefuls of soil around each tree in form of a mound, against the trunk. This mound should be made smooth and not contain sod, which is liable to harbor the mice in its crevices. It can be done very rapidly. After heavy snowfalls, that come above the mound, foot the snow close around the trunks will keep the mice away, for they will not dig in hard snow. This footing should be repeated after each heavy fall of snow, so that the mice will not have a chance to work on top of the old crust. Another method often followed, is to put a few kernels of corn that have been treated with strichnine under several trees, but so protected by covering with boards or boxes that it will not be accessible to birds or poultry. Several good eats will also help much in small orchards. Do not allow old grass or rubbish to collect around the trees.

Mildew in Black Currants—Mulching and Cultivating Strawberries.—P. W., Mt. Brydges, Ont. (1) Yes; clean cultivation and high manuring are helps. But the disease may be entirely prevented by spraying the foliage with a solution of liver of sulphur, in proportion of one ounce to five gallons of water. Apply as soon as the foliage is out, and at intervals of two or three weeks thereafter. (2) Yes; the foliage and fruit-buds develop stronger, unless on a north slope, where the snow remains late. A mulch, if kept on late, retards the blossoming season and there is less danger from the late spring frosts. Then it is necessary for the alleys to be mulched when the vines fruit to keep the fruit from getting dirty. (3) Because it would knock off the fruit and so loosen up the soil that it would spatter badly over the fruit. If they are properly mulched you could not cultivate. It is, however, best to remove the mulch early in spring, before the plants bloom, and give the bed a good working up and replace the mulch.

EXTRACTS FROM CORRESPONDENCE.

FROM ALABAMA.—Randolph county is situated in the eastern part of the state. It is well watered and timbered and adapted to cotton, corn, oats, potatoes and all kinds of vegetables. It has minerals in abundance. Two rivers run through the county, which afford plenty of fine sites for factories.

Ophelia, Ala. S. A. B.

FROM ARKANSAS.—Washington county is rather rough and broken. It is watered by three prongs of White river. The bottom land is rich and fertile, and worth from \$10 to \$10 an acre. Mountain land is worth from \$2 to \$6, and is good orchard land. A person with small capital would do well to invest in mountain land and make a fruit farm of it. We have good markets for all fruit farm products, good railroad accommodations, plenty of stock range and good water. The climate is healthy, with mild winters and cool summers.

Harris, Ark. H. F. A.

FROM KANSAS.—McPherson county lies in the central part of Kansas. It is a great wheat county. Wheat has never failed. Our wheat yield this year is a little below the average, but there are quite a number of fields that will yield 35 bushels per acre. Corn is an uncertain crop, but we have bright prospects for an immense crop this fall. Oats are not much sown—only enough for our home supply. Wheat yields from 10 to 40 bushels per acre; corn, 20 to 100; oats, 25 to 100. Prices of grain range as follows: Wheat, 67 cents; corn, 50 cents; oats, 21 cents. All kinds of fruit, such as apples, crab-apples, plums, peaches, pears, apricots, cherries and grapes, and all kinds of small fruit, grow successfully here. Wild grapes, plums and gooseberries grow in an abundant supply on the river and creeks. There is such an immense fruit crop this year that bushels will go to waste. This is one of the best and richest counties in the state for

farming and stock raising. In educational facilities our county is unsurpassed. We have two of the largest and finest colleges in the West—the Dunkards' college at McPherson and the Bethany college and normal institute at Lindsborg. Every district has a good school-building and good attendance, nearly half of the schools being graded. McPherson, our county-seat, has a population of about 7,000. It has four great railroads, street-cars, electric lights, two large flouring-mills, one of the best water supplies in the state, eight church societies, two large public school-buildings, and one of the finest opera-houses in the state. The Farmers' Alliance has a strong foothold here and is increasing rapidly. F. C. P. Lindsborg, Kan.

FROM INDIANA.—Monroe county is situated in the southern part of the state, in the heart of the oolitic limestone belt. At present there are twenty-six quarries in the county in active operation, with a capital of \$400,000 invested. More quarries will be opened soon. Experts say that Monroe county limestone is the finest in North America. This influx of capital makes times good, especially for the farmers. Land is worth from \$15 to \$200 per acre. The soil is well adapted to agriculture, and in horticulture this county ranks first in the state. Fruit of all kinds is plentiful annually and sells at top prices. Poultry, eggs, garden truck and dairy products find a ready sale in the local markets at good prices. Bloomington has 4,500 people, and is the center of trade and the seat of the state university. Clear Creek is active in the shipment of live stock and grain. J. W. M.

Clear Creek, Ind.

FROM MARYLAND.—More than half of the farms on the eastern shore of Maryland are not for sale at any reasonable price. The owners are satisfied with them and with the country. When a farm is for sale (and there are many), it is because the owner has too much land, is in debt, or wants to engage in some other business, generally because he has too much land. And of those who do sell, or want to sell, not one in fifty would leave the eastern shore. This is as true of northern men who have settled here as it is of the native born. I regard this as one of the best evidences of a desirable place in which to live. When a large proportion of the people desire to sell and go to some more favored place, to me it is a sure sign that there is something wrong with the country. This is a great wheat and corn growing section. Fruit growing and trucking are important industries, and the creameries located here and there give evidence that dairying is not neglected. Our climate is incomparable, our schools are good, church privileges the best and society unequalled.

Hurlock, Md. J. L.

FROM OREGON.—Jackson county has excellent crops of grain, hay, fruit and vegetables this season. Some of the very late wheat rusted this year, a thing which happens very rarely. Wheat is worth 60 cents; hay, \$5 per ton in the field. Very early peaches were a drug, owing to the great quantity offered; the later and better varieties will perhaps bring better prices. The prune crop of the state is not large, but we will have a full crop of apples. Recent discoveries of extensive asbestos fields in this county will attract much attention. It seems that we have enough of this mineral to last the world for a good while. It so happens that the old mines show signs of failure, and those wanting this curious mineral are all looking this way. So many and varied are the uses of asbestos that this discovery will be of untold advantage to us. These mountains are not in vain, for upon and within them are vast stores of mineral wealth. I wonder how many readers of FARM AND FIRESIDE know anything about asbestos or ever saw a specimen of the rock! It is a tough, fibrous rock of a flaxen color. Fire will not melt or burn it, nor will acids corrode it. It is one of a very few everlasting, indestructible products of nature. S. M.

Spikenard, Oregon.

FROM FLORIDA.—Marion county is centrally located in the peninsular part of the state and immediately in the center of the orange belt. Thousands of boxes of fine, bright oranges are shipped annually from our extensive groves. Vegetable gardening is successfully carried on here. Beets, cabbage, carrots, egg-plant, peas, potatoes, tomatoes, turnips, cauliflower, celery, onions, cucumbers and sweet potatoes are largely grown here. Of fruits we have the peach, pear, orange, plum, lime, lemon, olive, persimmon, apricot, pineapple, guava, quince and fig. Peanuts, almonds and walnuts are raised. The indigo plant is raised successfully. Almost all kinds of small fruits and berries grow very well, such as the blackberry, raspberry, strawberry, grapes, date palm, dewberry and mulberry. As to our climate, it is unsurpassed and has probably no equal in the world. Florida has as low a rate of mortality as any state in the Union, as is proven by official statistics. The warm term begins in June and ends in October. The heat is uniform and constant, but not so great as is often felt in northern states. We came here from Illinois, and I can say that we have never experienced any such heated seasons as we did within 130 miles of Chicago. Such a thing as a sunstroke is unknown in Florida. The elevation of the peninsula above sea level varies from 10 to 300 feet. According to the report of the United States Signal Service for thirteen years, it shows that in Bismarck, Dakota, the thermometer has registered as high as 105°, Washington, D. C., 104°, and St. Louis, Mo., 106°. During this same period the thermometer at Jacksonville, Florida, has only once exceeded 100°, and at Key West, 200 miles further south, the maximum during the same period was only 97°. Ocala, the county-seat of Marion county, is the model city of the state, and is destined to be one of the best cities of the South. It is located in the center of the lately-discovered phosphate beds. It has a population of four or five thousand, and has millions of dollars of northern capital. Ocala is headquarters for the phosphate kings and the gateway of transportation of the phosphate rock, most of it being shipped from Ocala to Charleston and Savannah. Millions of tons of our best Florida phosphate are exported to England and other foreign countries. Ocala is one of the most noted manufacturing cities of the state. We have two planing-mills, two machine-shops, an ice factory, an iron foundry and dozens of saw-mills in the vicinity. The Silver Springs, Ocala and Gulf railroad car-shops are located here. Our city is lighted by electricity and we have a street railway, a good water system and fine macadamized streets. L. F. B.

Ocala, Fla.

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I WILL BE WORTHY OF IT.

ELLA WHEELER WILCOX.

I may not reach the heights I seek,
My untried strength may fail me;
Or, half way up the mountain peak,
Fierce tempests may assail me.
But though that place I never gain,
Herein lies comfort for my pain—
I will be worthy of it.

I may not triumph in success,
Despite my earnest labor;
I may not grasp results that bless
The efforts of my neighbor.
But though my goal I never see,
This thought shall always dwell with me:
I will be worthy of it.

The golden glory of love's light
May never fall on my way;
My path may always lead through night,
Like some deserted by-way.
But though life's dearest joy I miss,
There lies a nameless joy in this:
I will be worthy of it.

A Guinea Guest.

CHAPTER I.

I SHOULD never have done it if I had not been so desperately hard up for money.

My brother Stephen says that is no justification for hartering one's self-respect; Grace and Sophy won't let him say so when they are by, but he has an oppor-

just eighteen, and she was the very best sister a fellow ever had.

Stephen's salary was raised about this time, and when Sophy joined us we gave up our old lodgings and took a little flat, just big enough to squeeze into, where Sophy kept house for us.

She had a great taste for drawing, and had set her heart on being an artist. As a first step she went to a well-known studio, where she hoped to be prepared to become an academy student. She used to go to the studio every day from 9 till 4, and then she came home and "made things comfortable for us," as she used to say.

There was a charwoman, a certain Mrs. Bennet, who came in the afternoons to help Sophy with the work, but our sister did the larger share herself.

Never was there such an industrious girl, and as for her management, it was wonderful. Our socks were always darned, and the buttons sewn on our shirts; there seemed to be a never-failing supply of clean table-cloths and neatly folded dinner napkins; nicely made little dishes appeared upon our table; the spoons and forks were always bright, and the glasses looked as clear as crystal.

She even saved money enough to buy an old piano, upon which we used to play duets in the evening. I was very fond of music and learned it at school, but had quite given up playing, when Sophy encouraged me to take it up again.

Sometimes we took our friends home with us, and Sophy always seemed ready for them and pleased to see them. I could not imagine how she contrived to make the home so pleasant and the money go so far. I used to laugh

That was how I came to be so desperately hard up for money.

I was so out of spirits that day that Eyres, my fellow clerk at the office, who knew something of my troubles, asked me whether my sister was worse again.

I told him how matters stood, and added, "I'd do anything in the world to earn a few pounds."

Eyres looked at me as if considering something, hesitated, as if about to speak, but finally said nothing.

"I wish I were a rich fellow, like you," I said.

"Rich!" replied Eyres, "I have nothing but what I earn."

I looked my surprise, for Eyres' salary from the company was only £10 higher than my own, and yet he seemed to have plenty of money, went out a good deal of an evening, and never seemed to want a shilling for a cab or a flower for his buttonhole.

"I have two strings to my bow," said Eyres. "I don't earn all my money at the office; I nearly double my salary by singing. I don't perform at music halls," he added, seeing my astonished face, "but I happen to have a tenor voice which people rather like, and I get plenty of engagements to sing at evening parties and at homes."

"I wish I had a tenor voice," I said.

"Really? I had an idea you were too proud, too much of a swell for that kind of thing."

"Proud!" I exclaimed, "I'd sweep a crossing, if that would earn the money, and if the company would stand it."

Again Eyres looked at me with that uncertain expression.

"If you know of anything, I wish you'd let

moment Sophy's pale face rose up before me.

"Have you made up your mind?" asked Eyres, just before we went home.

I shook my head.

"Better let me settle it for you," said he, "let me see, go, or not go—I say—'Go!'"

"What a joke! I'm glad it's settled that way. It'll be no end of a lark, and Sophy shall go to the seaside after all."

I was in high spirits as I walked off with Eyres, who was to introduce me to Markley's on our way home.

After all, I was only a boy, in spite of my six feet of height and the little black mustache which I used to stroke with so much satisfaction; and if I looked over 20, as people said I did, I made up for it by feeling rather younger than most lads of my age.

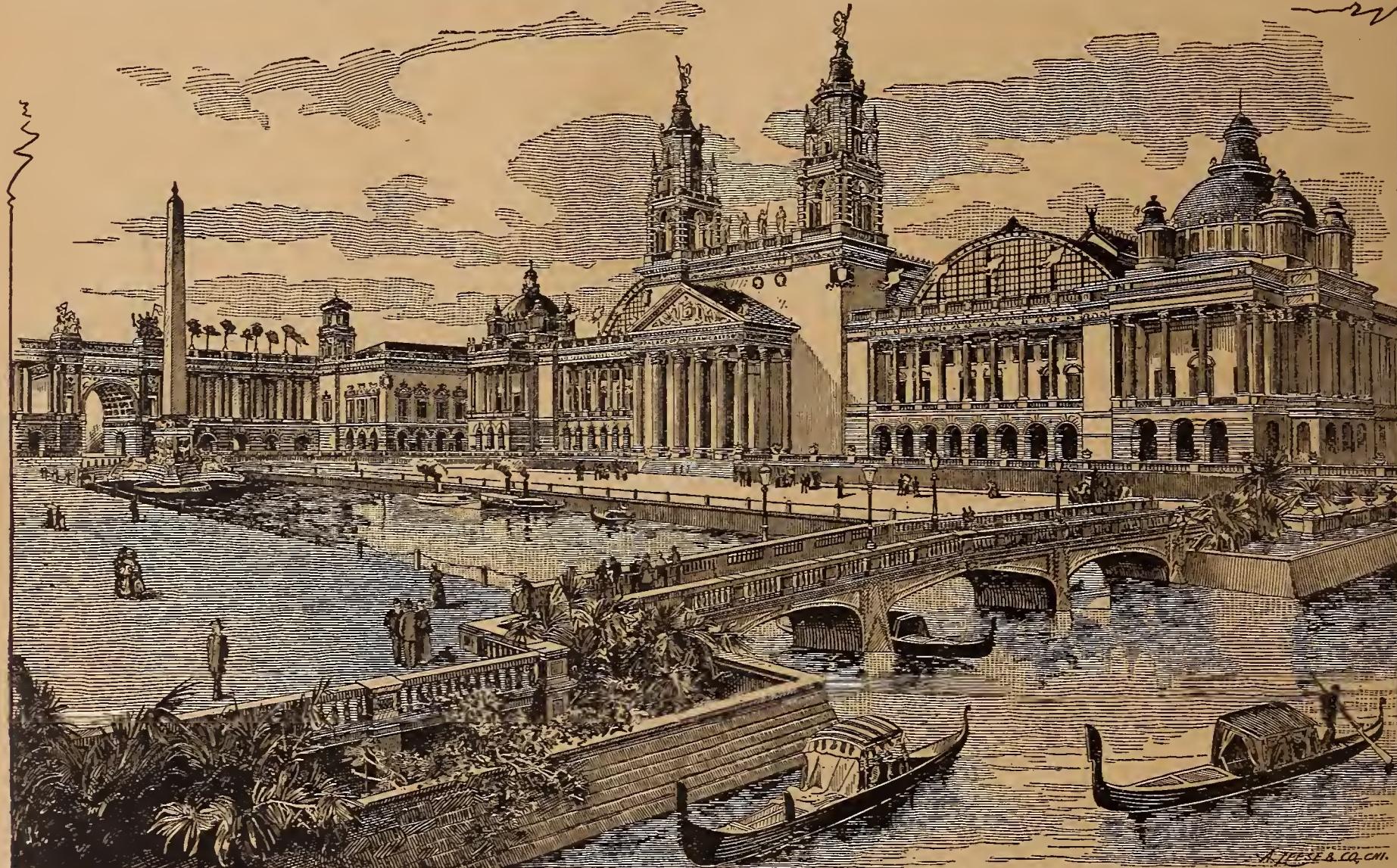
Youthful curiosity had its share in my feelings. I was embarking for a new and unknown world, and wondered what I should meet there.

CHAPTER II.

It was near the end of the London season, a hot July night, and Mrs. Martin Merryman's rooms were crowded to suffocation.

It might have been thought she could have dispensed with paid guests; but she was a prudent person, and I think she found it convenient to have a few hired guests at her disposal, to provide gentlemen for the plainer portion of her young lady friends.

I had been introduced that evening to at least half a dozen hard-featured girls, whose average age must have been six or eight years older than my own. To judge from their dress and their jewels, they were people of wealth,



MACHINERY HALL, AT THE WORLD'S COLUMBIAN EXPOSITION, CHICAGO, 1893.—For description, see next page.

tunity for giving me good advice of a morning, as we walk together to the city.

We are not in the same office; perhaps that is an advantage, else Stephen might give me more advice that would be good for me.

Stephen is in a bank, and I am in a fire insurance office. I don't dislike the work now I have got used to it; only the head clerk always makes me go and attend to the old ladies, who come with their grievances and complaints.

Stephen and Sophy and I were country-bred. Sophy is my sister, and Grace—isn't.

Stephen was the first to come to London. He is five years older than I am, and had got quite accustomed to city life by the time I left school, at the age of sixteen, to become junior clerk in a certain life and fire insurance company.

Stephen knew a few people, but he did not often introduce me to them, and he did not care much for going out himself. He toiled like a galley-slave at the bank, doing all sorts of extra work, and told me he intended to rise.

He was a good brother to me in many ways, and kept me out of mischief; but the first three years of my London life was a dreary time.

Then my sister Sophy came to live with us, and everything was changed.

Sophy did not leave school at sixteen, as I had done, because she was not obliged to earn her bread. Her godmother had left to her a little annuity, just enough to keep her. I hope that good woman has been rewarded for the deed.

When Sophy came to live with us, she was

and tell her that she must have the purse of Fortunatus at the bottom of her pocket, or a fairy godmother hidden behind the door.

It was very stupid of me, but I never guessed that the piano was bought out of her dress money, and that she remade her old hats, and remade her old frocks, and wore all her last year's clothes. Nor did I know that the pence to pay for the flowers were saved from her lunch; that she worked all day at the studio with nothing more nourishing to eat than a bun. I did not discover that she often got up at five o'clock in the morning, mending and making and washing, and, in short, doing two days' work in one. As the doctor afterward told us, it was wonderful she had endured the life so long.

I know that if a girl eats too little and works too much, she is sure to break down, sooner or later; but it was a dreadful shock to us, when we came home one evening, to find that Sophy had fainted dead away upon her return that afternoon, and was still unconscious when we came in.

Stephen rushed off for a doctor, but it was a long time before he could bring Sophy to life again, and then she was ill for many weeks.

It was a dreadful time, but at last Sophy began to get better again, and the doctor said that if she could have a thorough rest and change of air—go to some healthy country place for three months—she might quite recover her health.

Stephen looked very grave when he heard this, and I was in despair. Sophy's illness had used up all our ready money, and there seemed no possibility of following the doctor's advice.

me know it, too," I said, impatiently. "I tell you I'm prepared to get money any way, except by stealing it."

"I get my engagements chiefly through Markley & Co.," replied Eyres. "I know him pretty well, and I think he might engage you on my recommendation."

"But I can't sing a note."

"I didn't mean singing. If Markley engages you, he will engage you as a guest."

I was too much surprised to say anything more, and Eyres explained to me that the well-known firm of Markley & Co. not only undertook to provide refreshments and other necessities for evening parties and similar entertainments, but even went so far as to provide the guests themselves when required.

"But who can wish to hire guests?" I asked.

"A good many more persons than you imagine," replied Eyres. "People who are just beginning to make their way in society are nowadays desperately anxious to have their rooms full. It's on the principle of the decoy duck, I suppose. One person attracts another. If people see a roomful, they think there must be something worth coming for."

"It's rather a fraud, isn't it?"

"You'll earn your money as honestly as the waiters, who represent the hostess' footmen."

"I'd rather be a waiter, only I don't know the business," I remarked.

"The usual fee is a guinea," continued Eyres, "and you'll have to pay Markley his commission."

All day I remained in doubt. At one moment I thought of Stephen's scorn when he should come to hear of the matter; the next

unless, indeed, their ornaments were sham, like so much else in the entertainment.

I hurried off presently to look for the plainest young lady in the room, who had been especially recommended to my attention. Before I could find her a move was made to the supper-room, and presently I saw her going downstairs on the arm of another gentleman.

I was reprieved for the moment, and, returning to the hall-room, I looked around for some place to rest in. There were plenty of men to take the ladies down to supper, it seemed.

I strolled up to one of the three windows, all of which were open, and stepped out into a narrow balcony, which ran along the whole of the back of the house, and overlooked some ornamental gardens to the rear.

At the farther end of the balcony, by the third window, there were two empty chairs. It would be impossible to find a better place to rest. I sat down, and I think I fell asleep for a minute or two; at any rate I was very drowsy,

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when I was partly roused by the sound of a yawn, which came from some one on the other side of the piano.

"Grace!" exclaimed a voice, with a warning accent.

"Oh! I can't help it. I'm so tired. And it doesn't matter, there's nobody here. They've all gone down to supper."

"Poor Gracie! Sit down while you can, dear. After all, we've only got another fortnight to get through. Think of dear old Summerfield, and try and keep up your spirits."

"How I wish we were there to-night."

"I wish I had got something to eat. I wonder whether Mrs. Merryman will send us up some supper, or whether she'll forget it, as she did last time."

The two voices which had been speaking, relapsed into silence. I wondered who were their owners. It did not seem likely that Mrs. Merryman should have engaged any lady guests, as she seemed to have a superfluity of ladies; but if they were invited, and not hired, how came she to be so neglectful of their comfort? and why had they not gone downstairs to supper with the other guests?

I got up from my chair, walked quietly along the balcony to the window through which I had entered it, and stepped back into the drawing-room.

The room was empty, except for two figures near the piano. One of them, a lady of about thirty years of age, was seated on the music-stool; her companion, a girl some ten years younger, was leaning back in a chair with a look of exhaustion on her face. One hand, hanging at her side, supported a violin, which was resting on the floor; her other hand held the bow with which she had lately been playing.

I recognized the two ladies who had been playing the music that evening, and asked the elder one whether I might take her down to supper.

She declined, reluctantly, I thought, but gladly accepted my offer of getting some refreshment for herself and her companion.

The supper-room was furnished with costly profusion, and I was fortunate enough to light upon a tray, upon which I put half a dozen different articles, and hurried back with them to the two musicians.

The younger girl looked better when she had eaten something.

"It is very kind of you to wait upon us like this," said the elder lady presently.

"And it is a pleasure to find that there is one gentleman among Mrs. Merryman's guests," exclaimed the girl impulsively.

"Grace!" said her companion again, half appealing, half frightened at the imprudent remark. "Please don't take any notice of what my sister says; she is over-tired and not herself, to-night," she continued, speaking to me.

"And Emma is afraid you will repeat my remark, and that we may lose our next week's engagement in consequence," said Grace. "I don't care if we do," she went on; "this is a horrible house. They say Mrs. Merryman pays people to come to it, and that there are men who are degraded enough to take her money."

The scorn with which the girl spoke stung me like a whip. I would have given anything to have acknowledged my true position, and to have defended the conduct which she judged so severely. But Markley had explained that my engagements were "strictly confidential," and there was an understanding that I was to be silent about the terms on which I was engaged. I said nothing, but the color flew to my face, and I believe that I must have looked as foolish as I felt.

The elder lady, however, not unnaturally, thought my embarrassment arose from my displeasure at the way in which Grace had spoken of our hostess.

"Don't be angry," she said to me in her gentle, timid voice. "My sister has some excuse for speaking bitterly. One of these gentlemen was very rude to her the last time we were here. I would not have come again with her, but we cannot afford to pick and choose. I have three little children to maintain."

"Who has dared?" I began indignantly, but she hastily stopped me.

"Hush, please, or some one may hear you. The man is not here to-night. I believe he was one of those hired guests, for I am sure I have seen him at Markley's. He is not worth troubling about."

"It's too bad of Markley to send out such fellows. I shall tell him so the next time I see him," I exclaimed.

"What?" cried Grace. "Are you, too, a guinea guest? That's the price at which you let yourselves out, is it not?"

"Oh, hush!" said her sister, entreatingly, "they are coming up from supper. At least, you have been kind to me, and I thank you."

She smiled as she spoke, but it was a sad smile, as if there were tears not very far behind it, and then she seated herself once more before the piano.

Grace took up her violin; for a moment our eyes met. Hers were full of scornful mockery, and her lip curled with contempt as she shot a look toward the doorway, which at that moment was filled up by the figure of the plainest girl in the room.

"That young lady is looking for you," she remarked, in a freezing tone of voice; and I went forward to do the duty I had undertaken.

CHAPTER III.

I went home that night crushed with a sense of my humiliation. Those scornful eyes pursued me, and I could not get the sound of that contemptuous voice out of my ears.

As a rule, I used to go to sleep as soon as my head touched my pillow, but to-night I lay awake, tortured with shame, feeling myself utterly disgraced, and confident that my whole future life was blighted.

No one had ever despised me before, and two months earlier I should have confidently declared that no one would ever have the right to despise me.

Now I felt I had given that right to Grace; yet I revolted at the cruelty with which she had used it, and I wondered whether she would judge me less severely if she knew the whole story.

Then I asked myself why I cared so much for her opinion; and soothed in me replied, because it would be the opinion of any innocent girl.

The elder lady, the one whom her sister called Emma, had not been so severe as Grace; I felt she blamed me, but wished to make excuses for me. I wondered whether a woman became more indulgent when she had three little children to maintain.

My thoughts were getting incoherent; perhaps I had been awake half an hour, which seemed an eternity to me at the time, when kindly nature came to my aid, and the deep sleep of youth and fatigue fell upon me.

I was awakened the next morning by Sophy. She was standing beside me, with an amused smile upon her face.

"Make haste, Laurence, or you'll be late at the office this morning. Stephen has finished his breakfast."

There was nothing funny in that, and Sophy's amused face puzzled me.

I had awoken quite a fresh person from the unhappy being of the night before. Though still a little sore at the recollections of the previous evening, my unhappiness had rolled away before the morning light, like mountain mist before the sun; and as I dressed myself I thought more about Sophy than any one else. She was waiting for me in the next room, ready to pour out the coffee, which she had been keeping hot for me.

She was well enough to be about and resume some of her household occupations, but the doctor had strictly forbidden any more visits to the studio till her strength should be fully re-established.

She still had that amused smile upon her face.

"What's the joke, Sophy?" I asked.

"Who is Grace?" she asked.

I stared at her in amazement.

"What do you mean?"

Sophy laughed.

"If you want to keep a secret, Laurence, you shouldn't talk in your sleep. I was afraid you would be late this morning, as I did not hear you stirring, and I knocked and knocked at your door, till I feared the neighbors would send in to ask what was the matter; so at last I went in and touched you. You didn't wake even then; you gave a sort of a groan, and then you said, 'Grace, Grace, Grace.' Who is she?"

"She isn't at all a nice girl," I replied.

"Oh!" said Sophy, rather meaningfully, "why do you go where there are not nice girls?"

CHAPTER IV.

"It's all right, Sophy. You'll be very pleased by-and-by. Take care of yourself and don't do too much. Do you know I really think there will be a chance of your going into the country this summer, and then you will come back as strong as a horse, and be able to try for the academy in the autumn. I'm off now, or I shall be late."

I hurried away as I spoke, not sorry to escape from Sophy's questions.

How odd it was I should have been talking of that girl in my sleep. I had no recollection of dreaming about her, and in my hurry to dress and get my breakfast, I had hardly thought of her till Sophy had mentioned her name.

Now it seemed as though I could not get it out of my head—"Grace, Grace, Grace" seemed to run in it all day long.

Stephen was none carlier than usual that evening, and we three sat down to dinner together.

Stephen was usually silent, and I was feeling very sleepy, so we were not very lively company for poor Sophy.

I suppose she found it dull, for presently, with a mischievous smile, she said to me:

"Well, Laurence, how is Grace?"

"Grace!" exclaimed Stephen, before I had time to reply. "What do you know about Grace?" he continued, his usually pale face flushing as he spoke. "I'll have no interference on your part, Laurence. Please allow me to manage my own friends myself."

Sophy and I were struck dumb with surprise; but Sophy, who had no guilty secret and a fair share of feminine curiosity, was the first to recover herself.

"We are talking about quite different people," she replied. "But who are these friends, Stephen, with whom we are not to interfere?"

Stephen looked rather ashamed at his late outburst.

"I'm not afraid of your interfering with any one, Sophy; but Laurence is always putting his foot into things, and I don't care for him to make acquaintance with my friends behind my back."

"I'm sure I don't want to know your friends," I cried, rather crossly.

"They would be very nice friends for you, Sophy," continued Stephen, as if he had not heard me, "and they are kind enough to say they would like to know you. They have asked me to bring you to call upon them."

"I shall be very pleased," replied Sophy; "but you don't tell me who 'they' are."

"Mrs. and Miss Leigh."

"Is Miss Leigh called Grace?"

"I believe she is."

"He believes she is called Grace—the old humbug!" I exclaimed, when Sophy and I were alone together again. "I say, Sophy, poor old Stephen! he is gone upon that girl; he thinks there isn't another Grace in London."

"I hope she is nice," replied Sophy demurely. Sophy went with Stephen on the following Saturday to call upon the Leighs, and came back charmed with her new acquaintances.

"They are such nice people, Laurence. Miss Leigh is so pretty and so clever, and she plays the violin beautifully."

A sudden dread came over me. Suppose Stephen's Grace were the same as mine, and

that the girl who despised me so profoundly should become my brother's future wife and my sister's most intimate friend!

"What is she like?" I asked.

"Tall and slight, with a pale, smooth, white complexion and bright brown eyes."

"Did you like her mother?"

"Mrs. Leigh isn't her mother; she is her sister-in-law; but they are just like sisters, and always call each other so. Mrs. Leigh is a young widow, with three little children to support. She teaches music, and she goes out to play at evening parties. Grace goes with her and plays the violin, if people want a second instrument. But she doesn't like it, and Mrs. Leigh says her music is much too good for that sort of work."

"What a lot you seem to have learned about them!"

"Oh, yes, they were most friendly. Miss Leigh asked me about you, and Mrs. Leigh hoped you would go and see them when they come back from the country. They are going to a delightful place called Summerfield, very healthy and bracing, near a large common. An old friend, who has a little house there, is going to lend it to them."

"That would be just the sort of place for you to go, Sophy."

"Well, when I have made my fortune by selling my pictures, you and I will go there together."

I was on the point of telling Sophy that she need not wait to make her fortune before getting the country air she so sorely needed, but I had still one other engagement to keep, and I had determined to say nothing till my bondage was over and my tale of bricks complete.

I could have no doubt that Mrs. and Miss Leigh were the two ladies I had met at Mrs. Merryman's, and the best I could hope for was that, if I could keep out of their way for a time, they might not recognize me if we ultimately met. It was a good thing they were going to Summerfield, as it would be easy to avoid them for a week or two, and perhaps I should be altered by the time they came back.

I wondered whether Stephen and Sophy would find me out if I took to wearing spectacles as a disguise. I even contemplated the heroic sacrifice of shaving off my mustache.

The eveing of my last engagement had arrived, and my heart beat a little quicker than usual as I entered Mrs. Freshfield's drawing-room.

I dreaded another encounter with Mrs. and Miss Leigh, in case they should be playing that evening. It was not unlikely, as they got their engagements through Markley; and the first glance I gave across the room told me my fears were realized. Mrs. Leigh and Grace were at the piano. I pity the poor young ladies I entertained that evening, for I gave them but a divided attention, and must have been a very dull companion.

I tried to keep out of sight of the two musicians, and hoped they would not notice me, though I could not help glancing now and again at Grace, to see whether she were looking at me. She appeared to be engrossed with her music. I hoped that she and her sister had forgotten my appearance, and would not know me again.

It was a large party for the size of the house, and there was only space for half the guests in the supper-room.

"It does not matter," remarked Mrs. Freshfield. "We must go down to supper in two batches, and the music can go on during supper-time. 'Mr. Haviland,' she continued, turning to me, "will you tell the music people I shall want two extra pieces played during supper-time?"

I could not refuse, and, against my will, I took the message to Mrs. Leigh.

I noticed she was looking very white, and did not seem to take in what I said to her, but Grace, who had been resting a moment, jumped up in great agitation.

"She can't possibly do it," she said, in low but vehement tones. "I hoped she would rest during supper-time and be able to pull through the remainder of the evening. What are we to do? Why will people be so cruel?"

"Let me go and tell Mrs. Freshfield that your sister is over-tired and wants a little rest."

"No, no—that won't do! She'll complain about it to Markley; last week Emma fainted right off at Mrs. Upperton's, and Markley said if it happened again he could get her no more engagements."

I thought for a moment, and then a bright idea came into my head.

"I can play a little myself, and, happily, I know everything by heart. Let me take her place at the piano. Do you think your sister can get over to that little inner room; it is cool and quiet, and there are some easy chairs there."

Without wasting words Grace helped her sister across the room, while I turned toward the piano. Just as I was sitting down I caught sight of Eyles, who had been singing at the house early in the evening.

I hurriedly explained what had happened, and he hastened off to get refreshments for the overworked musicians, while I played in my best style. Mrs. Freshfield was engrossed with her guests downstairs, and hearing that some sort of music was going on above, gave no further thought to the matter, and I don't think she ever discovered the change we had made.

When supper was over, Mrs. Leigh was well enough to resume her place. Later on Eyles persuaded Mrs. Freshfield to let him play a couple of duets with "the pretty violinist," and Mrs. Leigh got through the evening without a break-down.

When we were at length released, I put the two ladies into the cab which was to take them home.

Mrs. Leigh was profuse in her thanks to me, but Grace remained silent, with her eyes fixed on the ground.

It was not till she was seated in the cab, and I had fastened the door and was turning away to give their address to the cabman, that she raised her brown eyes to mine and said simply:

"I beg your pardon, Mr. Haviland."

CHAPTER V.

The next morning I told everything to Stephen and Sophy—everything about myself, that is, for I thought it better to let Grace tell her own story to Stephen.

Sophy cried and kissed me, and laughed and kissed me, and altogether behaved in the most absurd manner, which was a great relief to me, when I came to think over the ridiculous figure I had cut during the past two months.

"How could you bring yourself to do such a thing?" said Stephen, looking at me as if I were a new and curious specimen of humanity.

But I considered his question as a mere oratorical mode of expressing his disapproval—it did not require an answer.

My conduct came up for discussion again a few days later, when we were all spending the evening at Mrs. Leigh's.

"Of course you ought never to have even

thought of such a thing, but we all like you the better for having done it," said that kindly-hearted lady, when reviewing my late proceedings.

"Your verdict, Emma, is equal to the celebrated 'Not guilty—but don't do it again!'" said Grace, laughing.

"Then

Our Household.

LOST AND FOUND.

I didn't think I'd the ghost of a show,
And yet it seemed to me best
To ask her the question, and then to go
And ranch it awhile in the West.
I firmly meant to be bound or free,
But I thought as I met her glance,
"If she says she'll be a sister to me,
I'm afraid I shall jump at the chance."

Then at last I stammered out my love,
While she listened in shocked surprise;
And her ancestors, hung on the walls above,
Flashed scorn from their painted eyes.
As I urged and begged, and prayed and plead,
Her demeanor grew colder and colder;
Till all of a sudden she lost her head,
And I found it—upon my shoulder!

—Brooklyn Life.

OUTLOOKS.

THERE are always some windows of a house that have very unpleasant outlooks. In crowded neighborhoods, even if the outlook is not unpleasant, it may be so near your neighbor that the window must be closed to insure privacy.

To obviate this, a very simple process may make it useful and still give the benefit of the light. Two cents' worth of Epsom salts dissolved in a pint of sour beer will cover the window with an opaque substance resembling hoarfrost, and while obscuring the view will still admit the light. It should be put on with a sponge, not allowing it to be too wet, as it will spoil the effect. It will fall into all sorts of pretty patterns.

I saw another set of windows, looking upon uninviting back parts and not needful for light, that were hung with yellow China silk curtains gathered full and attached to the top of the window-frame, hanging clear of the lower sill and finished at the bottom with narrow, silk fringe.

The transparent paints so extensively advertised are quite available for this purpose. Also, the paper which, when put on the glass, gives it the appearance of stained glass.

Many neat devices can be brought out by a little thought. Perhaps the most easily contrived are screens made from the common clothes-horse, with just a straight piece of heavy material drawn smoothly around the upper part, and a curtain—which will cover the lower part—of some of the thin, cotton materials called silkene.

In summer there is nothing so pretty as a natural screen of some kind of vines of rapid growth. Of course, these will exclude the light, but they need not exclude



FLOSSIE YOKE APRON.

the air. If the window is a very sunny one, a frame of light wood can be built outside of the top of the frame and secured to the side of the window-frame with braces. This has the advantage of keeping out the heat and admitting the

air. If vines of any kind are allowed to grow too near a window, they will create a dampness in the room and make it very unhealthy. A permanent frame of wire, forming a lattice, will be more durable, as it will stand the wind and weather better than one of string. A hardy variety of the clematis can be trained into a very pretty shape, and every year it will grow more luxuriant, and when it is covered with its wealth of lovely flowers nothing can be more beautiful. A clump of trees with low-growing branches can be arranged to shut out an unpleasant view. The Norway spruce is a good tree for this purpose. Planted in groups of three, in a few years they form a complete screen. They are also good to plant at the north side of a house, as a protection from rough exposures and cold winds. I have in mind a place with very unpromising outlooks that is so encircled with trees that the only outlook from the windows is the beautiful enclosure and the sky above. From the balcony above, the eye takes in only the tree-tops and the vista in the distance.

Nature's gifts are free to all, so we can have them when we please.

CHRISTIE IRVING.

HOME TOPICS.

GASOLINE FOR CLEANING.—A few days ago I sent a white flannel jacket to the cleaner, but it was brought back with the

piece of flannel or a sponge with warm water first and then pour on a little ammonia. Wash out the sponge frequently in the warm water and wet it again with ammonia. A little ammonia added to the water in which windows or woodwork is washed is a great help. It is better than soap to use in washing dishes or silver.

Whiting, moistened with ammonia, is excellent for cleaning silver.

A tablespoonful of ammonia added to the water for a bath will make it much more refreshing. A large bottle may be bought for from seven to ten cents, and is worth much more than that in the household.

KEROSENE OIL.—Some laundresses use kerosene oil instead of gasoline in washing, and with good results. A teaspoonful of oil added to starch will make the clothes iron and polish easily.

In talking with a friend lately, she said: "I want to tell you a remedy for bunions which has helped me so much that I want everybody to know it. Saturate a piece of cotton cloth with kerosene oil, fold it several times and bind it on the inflamed joint. It will remove the soreness and allay the pain in a few days. I have not tried it long enough to know whether it will effect a permanent cure, but it has certainly made life wear a very different aspect to me since I tried it."

Do not use a flannel cloth, as it might blister; but used on cotton it will not, and

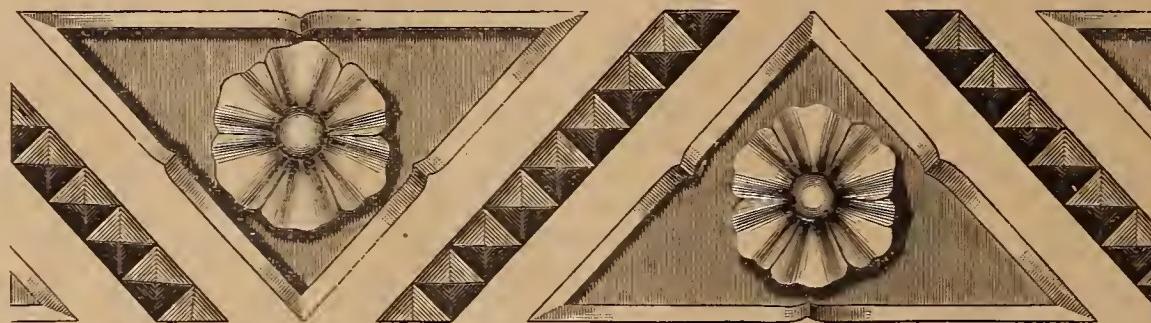


FIG. 3.—TOP OF CABINET.

message that it could not be cleaned and returned in less than four days. As the owner was going away in three days and wanted to take the jacket with her, this would not do. It was soiled too much to wear as it was, so I resolved to experiment upon it. I put two quarts of gasoline into a wash-bowl and put in the jacket, let it stand a few minutes, then washed it, rubbing the soiled places as if I were washing it in water. After rinsing it in more gasoline I hung it on the line in the yard until the gasoline had evaporated, then pressed it, and it looked as well as ever, or at least as well as if I had paid the cleaner seventy-five cents, and it only cost me ten cents. I am going to try a white flannel dress next. Washing with gasoline should not be done in a room where there is a fire; better take it out of doors, and do not bring the article washed near the fire until the gasoline has evaporated.

The work of doing the family washing may be very much lessened by soaking the clothes in clear water a few hours, or over night, then wringing them out, soaping the soiled places and putting them into a boiler of cold water in which you have put a small teacupful of gasoline. Set the boiler on the stove and let the clothes boil about ten minutes, then a little rubbing in the sudsing water and thorough rinsing will finish the washing, and the clothes will be beautifully white. Half a teacupful of gasoline in a pail of water will make the kitchen floor look much better than soda or soap.

In cleaning spots off clothing with either gasoline or benzine, fold a piece of clean woolen goods and put it under the part to be cleaned, saturate another piece with the benzine and rub the spot gently the way of the nap, if there is any. Rub for some distance around the spot. Change the piece that is underneath, and with a dry piece of flannel rub the spot until it is dry, and there will be no dark ring left, as will sometimes happen if the work is not well done.

HOUSEHOLD AMMONIA.—Household ammonia may be used instead of benzine in cleaning gentlemen's clothes, and has the merit of evaporating almost immediately and leaving no odor. I have also cleaned spots from wool dresses with it, but have never used it on delicate colors. In cleaning spots with ammonia, I moisten the

is certainly a simple remedy and well worth a trial.

A CABINET FOR THE BOYS TO CARVE.

BY KATE KAUFFMAN.

No. 2.

Is this not a pretty cabinet? Imagine it on your mother's best wall, with some of the fine old dishes she is so proud to show! Are you a good enough cabinet-maker to put the parts together? At least you can cut out the pattern and give directions for its construction. Those narrow boards which make the backing are only three inches wide; they are tongued and grooved together. Now, if you intend to put books on those two shelves where the plain backing shows, it is good enough, but if you wish to put odd articles at some distance apart, *bric-a-brac*, as we say, it would be better to ornament the wood with some design. You might put that "shingle-pattern" which I gave you July 1st, it was number 3, while number 2 is excellent to put on the front edge of each shelf. These edges are not decorated in the illustration, but it would not be amiss to embellish them.

The top may have figure 3. This has a row of the "dog-tooth" pattern crossing it diagonally, and in the triangles between, a rosette is placed in relief.

The side of the cabinet has an all-over or diaper pattern. Figure 2 is very pretty for this purpose. The picture of it is so plain that it explains itself. First get the bands which cross each other diagonally, and then when you are sure that you have the square openings of exactly the right size (you can make them larger or smaller than in the picture) fill them with the design. If I were going to mark off this pattern for myself, I should cut the figure out of a stiff card and then lay it in each square, tracing around it with a very sharp lead-pencil.

The lower part of the cabinet has the deepest, handsomest decoration that is on it anywhere. This is right because it will be more observed. We will leave any description of it till we talk specially of relief work.

One great question will be what kind of wood to use for these pretty shelves. We are apt to get rather monotonous in our furniture if it is all black walnut. Cherry is nice because it has a sweet smell, a

cheerful color, and takes polish, getting handsomer every year. The stump of an old apple-tree is considered a treasure by many carvers in Europe. It must be well seasoned.

Pear wood and plum wood are both worthy to be carved and polished. Indeed, in foreign countries where they take much better care of timber, and know what it is to be economical, these two trees are much esteemed for the purpose of the cabinet-maker.

Beech can be used, and even good pine makes handsome pieces of furniture. There is one thing to be watched by the carver, that is the disposition to splinter which some woods have. A little acquaintance with the timber in hand and a habit of cutting (not breaking) will insure good results from any wood.

California redwood is as beautiful as mahogany, and easy to cut.

Take the wood most convenient. Sometimes work over parts of old tables, etc., which have been put in the garret as quite good for nothing. Some good housekeepers object to carved wood because it "catches the dust." It cannot be denied that it does get dusty, but the oftener you oil your work the more highly polished it becomes, and finally it is so smooth and hard that the dust does not sink into it, but can be easily blown off. Use raw linseed-oil. You can rub it in with a hard scrubbing-brush. This always makes the wood a darker color. If, however, you wish to stain light wood, there are several simple recipes. Soda dissolved in water will improve the color of oak. It should be put on with a sponge or brush, repeating the application several times. Do not put on enough to warp the wood. Dark tea with alum in it will have the same effect.

Remember you are to let each application dry before you put on another, and after several of these you may see very little change in the color of your wood. Rub the wood with a brush or chamois skin, for anything that sheds lint is not so good.

Sometimes folks wish to stain wood quite a dark brown. For this purpose powdered umber mixed with a little beer will make a good shade. For myself I do not like any stains but the mellow richness produced by oiling. You would do well to chat with some clever cabinet-maker concerning the various ways of finishing woodwork. He will tell you about "filler," and a great many other things used by professional workers.

It is time that you boys begin to take some interest in knowing about men who are noted as having been great wood-carvers. There was one called Grinling Gibbons. The English people take great pride in him. He decorated some of the homes of the nobility; one ceiling at Petworth is considered his masterpiece. He lived in the time of Charles II. Some of his work is in St. Paul's cathedral, London. He delighted in making foliage and flowers.

If you ever have the good luck to go to Europe you will find wood carvings of all kinds, from toads, lizards and griffins up to the Holy Apostles, all interesting, especially after you have used a mallet and chisel yourself. We cannot say that it is all beautiful; no, but it is quaint and worth intelligent study.

TUTTI FRUTTI JELLY.

Soak one half ounce of gelatine in two cupfuls of cold water; after it has stood twenty minutes add one quart of boiling water, the juice of three large lemons and two thirds of a cupful of sugar; when all is thoroughly dissolved strain until clear. Pare and slice three large bananas, peel and cut two oranges in small pieces, free them from seeds and tough portion. Press the pulp and remove the seeds from three bunches of grapes; after the gelatine mixture is cool (not cold), stir the prepared fruit into it and put all in a jelly-mold, setting it upon the ice to harden. Serve with whipped cream.

YOUR BEST LIVER STIMULANT is DR. D. JAYNE'S SMALL, SUGAR COATED SANATIVE PILLS. No nausea, and, in most cases, absolutely painless. At proper intervals, single pill doses are usually sufficient.

Read adv. of B. & O. R. R. on page 400, this paper.

BABY HAS GONE TO SCHOOL.

The baby has gone to school; ah me!
What will the mother do,
With never a call to button or pin,
Or tie a little shoe?
How can she keep herself busy all day
With the little "hindering thing" away?

Another basket to fill with lunch,
Another "good-by" to say,
And the mother stands at the door to see
Her baby march away,
And turns with a sigh that is half relief
And half a something akin to grief.

She thinks of a possible future morn,
When the children one by one
Will go from their home out into the world,
To battle with life alone,
And not even the baby be left to cheer
The desolate home of that future year.

She picks up garments here and there,
Thrown down in careless haste,
And tries to think how it would seem
If nothing were displaced;
If the hours were always as still as this,
How could she bear the loneliness?

WALL-PAPER.

Fall house cleaning once more stares the busy housewife in the face, when it seems as if the last carpet had only just been put down from the sprig renovating. In many cases the walls present the worst appearance, not only from their soiled look, but the cracking of the plaster, which no amount of papering seems to keep whole.

Experience has taught us a plan that is very satisfactory. We use calico for such walls instead of wall-paper. If one spends a little time in visiting different stores, they can find prints of various styles that resemble wall-paper very much, in figure and color. By getting a bolt or two of the cloth, you will get a reduction in price also. Sweep the walls down clean, and with a paste-brush go over perpendicularly a strip a very little wider than one breadth of calico, with good paste. (A little glue water mixed with the paste is excellent.) Have the strips of calico cut the height of the room; and as fast as one place is ready for a breadth, apply it carefully and evenly, being particular not to stretch the selvage out of line. We first tried putting paste on the cloth, as we would paper; but could not keep the strips as true and free from wrinkles as we did to apply the paste to the wall. The cloth should be cut, as calico will generally tear crooked.

Select a pretty wall-paper bordering that will correspond with the cloth, and after your room is completed scarcely any one would notice but that it was paper; and it does make such a solid, nice wall. The next time you paper the room, use paper if you like, and put it on over the cloth; the old bordering might be removed if it can be done without pulling down the cloth too much.

Many old farm-houses have the chambers ceiled overhead with boards, which have shrunk enough to leave cracks that make good sieves for the dirt that any stray mouse may stir up in the dusty loft. We papered them overhead with the cloth same as the side walls, and decorated the corners with the paper designs, and were well satisfied with the result. We

ing the summer the stock left in the store is sorted, and all small lots of a roll or two are thrown onto the remnant counter—gilt paper as well as the cheap. If one can spend the time to look those piles through, they may find several rolls alike; and if they know exactly how much a room takes, there may be enough to cover it nicely. But one must be very accurate in their measures, as there will be no going after one more roll if it falls short. The price will probably be no more for gilt remnants than for cheap paper from the stock; and the effect is infinitely better, and the paper more durable.

Sometimes there will be two kinds that look nicely together; one variety may be used to paper below the chair-rail (most always found in farm-houses) and the other above, and a pretty border at the top. Many small rooms, especially if the ceilings are low, only take two or three rolls. Our house is nearly all papered with expensive paper taken from the remnant counter, and has cost us less than one of the ordinary rooms papered with paper of the same grade, taken from the stock at the usual price. Try the plan, sisters, and see if you are not pleased with the result.

GYPSY.

PICKLED BLACKBERRIES.

I thought I would tell the sisters how I pickle my blackberries. I have them only in the garden, so I do not get enough ripe at a time to fill one of the large recipes. I take enough berries to fill a quart jar, one coffee-cupful of sugar and one third of a cupful of good vinegar; put the sugar and vinegar on and cook slowly until a thick syrup, taking care not to burn. Then add the berries and stew until red; just before sealing, add spice to taste.

As I receive many good hints from FARM AND FIRESIDE, I thought I would add my little, thinking perhaps it would benefit some one.

MRS. I. C. Y.

A FEW SUGGESTIONS.

I think it is about time for me to add my mite. I will tell the sisters the use I make of our page. We have taken FARM AND FIRESIDE for a number of years, and I saved the household page and have quite a collection. I cut out all the recipes and paste them in a book, putting the cake recipes in one place, those for meats in another, and so on, like a cook book. Try it, and I am sure you will be pleased with it.

I think if more of our readers would add to our columns we would have a very interesting page.

Will some one please tell me how to cook Brussels sprouts? BLOSSOM.

SUGGESTIONS FOR HOUSE WORK.

The washing of paints and windows appears a very simple matter to housekeepers, but it is frequently so indifferently done that in a few weeks after the house cleaning has been done it would be impossible to tell that this part of the work had received any attention.

For satisfactorily cleaning paints and window-glass, a sunny, dry day should be selected. Early in the morning, the rooms to be cleaned should be opened and aired, the dust should be brushed from the woodwork and glass to be cleaned before they are washed; then have a bucket of warm water, to which add a tablespoonful of pearlina, and wash the paints off lightly and wipe dry. A flannel cloth is best for washing, and an old, soft cotton one for drying. The dirtiest paints will be made to look clean and fresh if washed in this way, while the most delicate, upon which soap cannot be used, will not be injured.

In washing windows take fresh water, which should be hot, and add half the quantity of pearlina; wash clean, rub nearly dry and polish with soft paper. For the floors, closets and presses have the water as hot as the hand will bear, wash clean, rinse and wipe dry. After cleaning a room thus, it is best not to put down the carpet at once, but let it stand open and air until the next day. If paints and windows are cleaned in this way three or four times a year, overworked

housekeepers will find the work of cleaning very much lightened, besides the satisfaction of being clean all the year.

A sponge is excellent for washing windows, and newspapers will polish them without leaving dust and streaks. Use a soft pine stick to cleanse the accumulation of dust from the corners of the sash. Ammonia will give the glass a clearer look than soap.

Keep on hand a good supply of bolts, screws, nails and tacks, together with a

old. Upon examination, I found the anterior portion of the body, arms and legs blistered and deeply burned from a kettle of hot water which the child had upset upon itself. The case, to say the least, was unfavorable for the success of any remedy. I prepared a large poultice, softening the leaves with hot water, and while yet quite warm applied it upon cotton wool over the entire burned surface. Almost like magic the suffering abated, and without the use of any other anodyne



FIG. 2.—FOR SIDE OF THE CABINET.

screw-driver, gimlet, hammer and hatchet, so as to be prepared for emergencies which call for these articles. It is very well to keep putty, also, and learn to be your own glazier when you live far from professional ones.

FLOSSIE YOKE APRON.

Many mothers wanting to make the little girls' aprons for school wear will find a pretty model in our illustrated pattern from the Jenness-Miller journal. It may be made up with the short lengths of hemstitched or embroidered white goods with a yoke of embroidery, or a pretty gingham with the yoke cut bias and edged with a ruffle embroidery.

TEA LEAVES FOR BURNS AND SCALDS.

Dr. Searles, of Warsaw, Wisconsin, says, in the Chicago Medical Examiner:

"Some few years since I accidentally found that a poultice of tea leaves, applied to small burns and scalds, afforded immediate relief, and I determined to give it a more extensive trial when opportunity should present, which soon occurred. It was in a case of a child fourteen months

the child soon fell into a quiet sleep. In a few hours I removed the application and reapplied it where it was necessary. I found the parts discolored and apparently tanned. The acute sensibility and tenderness had nearly disappeared, and the little patient passed through the second and third stages under far more favorable circumstances (symptoms) than was at first anticipated, making a recovery in about two weeks.

"Since then, on several occasions, I have had reason to commend tea leaves, till now I have come to prefer it above all other remedies in the first stage of burns and scalds. I think it must recommend itself to the profession, not only on account of its intrinsic worth, but also by reason of its great convenience, being so readily obtained."

To prevent fevers, keep the liver active and bowels regular with Simmonds Liver Regulator.

DRESSMAKING SIMPLIFIED.
Any Lady Can now Learn to Cut Perfect-Fitting Dresses.

Patented
1879-1885
1885-1886
One who uses a Chart or Square can compete with The McDowell Garment Drafting Machine in Cutting Stylish, Graceful and Perfect-Fitting Garments. Easy to Learn, Rapid to Use, Fits any Form, Follows every Fashion. An invention as useful as the Sewing Machine.
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Silk Satin & Plush Remnants for Crazy Patch. a large pkg. pretty pieces, assorted col. 10 cts. 12 pks. \$1 LADIES' ART CO. Box 584, ST. LOUIS.

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If afflicted with sore eyes use Dr. Thompson's Eye-Water

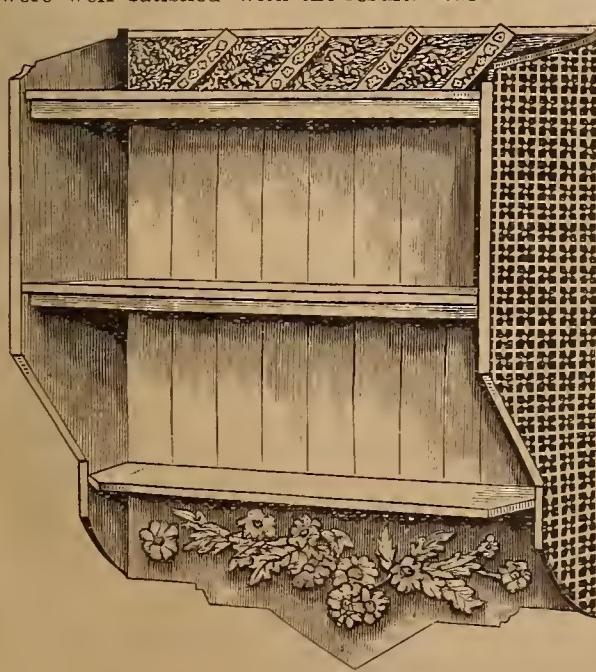


FIG. 1.—WOOD CARVING.

would advise choosing a small figure in the calico, and nothing very striking in color.

We also have another scheme in selecting wall-paper that we think saves us many a penny. City people do the most of their papering in the spring; and dur-



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1891 Fall Book
Imported & Manufactured
Cats, Foxes, Mink, Furs

Fill out this Blank and mail it to us with 20 cent postal order and we will forward you our very interesting Fall and Winter Fashion Catalogue, fully illustrated in the correct colors and containing over 1,000 descriptions of the latest Paris styles, enabling you to procure a superior garment at a lower price than what you can find elsewhere. Write plain with ink.

Name _____
Street _____
Town _____
County _____
State _____

Our Sunday Afternoon.

THE LAND OF LONG AGO.

It was home! that land where our mother's hand
Her little one's curls caressed;
There we smiled and wept, and as sweetly slept
As baby birds in their nest.
Now a sigh ascends for the dear old friends;
We can never hope to know
Any hearts so kind as those left behind
In the Land of Long Ago.

Then what bright romance was that first glad glance
Into Love's enchanting book;

And what thrilling bliss when the first fond kiss
From our darling's lips we took.

We may woo and wed, but till life hath fled
We shall yearn, and sigh also,
For the angel fair whom we worshipped there,
In the Land of Long Ago.

Though our dreams are gone, yet we still plod on

A weary with pilgrimage;
Let us do the right, and with evil fight,
Till we reach life's resting stage.
Then shall friends who weep o'er our dreamless sleep

In the churchyard lay us low;
When the night is o'er, we may wake once more

In the Land of Long Ago.

—Sunday Magazine.

WOMAN NOT THE WEAKER VESSEL.

AMONG savages the woman is just as healthy as the man. Considered as an animal from a physiological standpoint, a woman is capable of more hard work, of enduring more hardship, deprivation and disease than a man. A woman will endure where a man will succumb and break down entirely. She is not naturally the weaker vessel, and certainly in some respects a woman is constitutionally the superior. Out of an equal number of male and female infants there will be found at the end of the first year of life a larger number of girls alive than boys, according to statistics. This discrepancy continues up to the age of fifteen or sixteen, when the mortality becomes greater among the girls. At the age of forty or fifty the death rate is about equal in both sexes, and, finally, the oldest inhabitant is always a woman, thus showing that her constitutional fund of vitality is naturally the greatest. —Edward Everett Hale, in the New York Forum.

A TEST OF PIETY.

If our path be one of daily, weekly, monthly, yearly progress; if we are growing substantially better as we grow older; if we are more penitent and kind, more meek, humble and obedient, more diligent and self-denying, more anxious about being what we ought to be, and less anxious about feeling so or appearing so, then we may have hope that our religion is somewhat substantial, that it can stand against scorn and contempt without, and also against impatience, fretfulness and despondency within; that we are in some faint degree at least, unworthy as we are, yet in some faint degree "adorning the doctrine of God our Savior;" that the path we have entered on is the path of the just, and will be found to be "as the shining light, that shineth more and more unto the perfect day"—even that perfect, glorious, endless day, when to Christ's humble, lowly, penitent and obedient servants the Lord shall reveal himself as their "everlasting light, and the days of their mourning shall be ended." —Plain Sermon.

OCCUPY AND BE OCCUPIED.

What and with whom? He says, "Occupy till I come." Occupy the place he puts you in to do his service, filling it, with his love filling you, and poured out through you as a broken and emptied vessel. Remember that this place is only to be occupied till he comes; therefore, it is not your place, but the Master's, where he has put you till he sees fit to change your place. Thus remembering, we shall keep our hands off, and see him working—doing his work through us. Be indwelt by him and busy for him. Let our thoughts be so occupied by his thoughts, that, instead of looking at the stumbling blocks which the adversary shows us, our thoughts will be higher with him in heavenly places. Let us, also, be much occupied with him, and then, whether we be encouraged or blamed, we shall always see Christ in all, and have his "Well done, good and faithful servant."

THEY NEED PUNISHMENT.

When a man or woman says that it is impossible to have a flower garden or plant shrubs in the yard because their children will destroy them, who most need whipping, children or parents?

Talk hopefully to your children of life and its possibilities; you have no right to depress them because you have suffered.

Asthma The Miraculous Kola Plant, Nature's Sure Cure for Asthma. Discovered on Congo River, West Africa. Cure Guaranteed or No Pay. Export Office, 1164 Broadway, New York. For Book & Trial Case, Free by Mail, address, KOLA IMPORTING CO., 132 Vine Street, Cincinnati, O.

Read adv. of B. & O.R.R. on page 400, this paper.

THE BENEFIT OF NEWSPAPER TRAINING.

I believe I have done everything which an editor or publisher ever has to do, from directing wrappers up to writing the biography of a president within an hour after his death. This means, if the training be continued through many years of life, and if one be under a good chief, that one gains, of necessity, the ready use, at least, of his own language. We newspaper men may write English very ill, but we write it easily and quickly. So that to us, who have been in this business, there is something amazing to hear a clergyman say that he occupied a week in composing a sermon, which was, at the outside, thirty-five hundred words in length. One can understand absolute inability to do it at all; but no newspaper man understands how a man, who can do it, can spend thirty-six hours in doing it. If you have to send "copy" up-stairs, hour after hour, with the boy taking slips from you, one by one, as they are written, and you know that you are never to see what you write until you read it the next day in the paper, your copy will be punctuated carefully, written carefully, and will be easily read. That is one thing. Another thing goes with it. You will form the habit of determining what you mean to say before you say it, how far you want to go, and where you want to stop. And this will bring you to a valuable habit of life—to stand by what has been decided.

Napoleon gave the same advice when he said, "If you set out to take Vienna, take Vienna." For these reasons, I am apt to recommend young men to write for the press early in life, being well aware that the habit of doing this has been of use to me.—Edward Everett Hale, in the New York Forum.

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THEY NEED PUNISHMENT.

When a man or woman says that it is impossible to have a flower garden or plant shrubs in the yard because their children will destroy them, who most need whipping, children or parents?

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THE POULTRY YARD.
Conducted by P. H. Jacobs, Hammonton, New Jersey.

EARLY CHICKS FOR MARKET.

NOVEMBER will not be too soon to begin operations for hatching the early broilers. It requires three weeks for incubation, which will bring the hatch down to about December, and ten weeks more will be required for the growth of the chicks, thus getting them into market in March. All the operations for hatching should therefore be completed before January, if early broilers are to be a specialty. As one can easily calculate the number of weeks required for hatching and raising the chicks, the importance of beginning early cannot be too strongly urged. It is an excellent rule to allow three months from the time the eggs are put into the incubator until the chicks go to market, when they should then weigh about one and one half pounds each.

Early chicks in large numbers will be an impossibility with the use of hens, as the hens are too uncertain, and may not begin to set before spring. If the broiler business is to be conducted with a view of securing a profit, the hatching must be done with incubators, in order to have such work under control. With an incubator one can hatch out chicks at any time and in as large numbers as may be desired, while the hen is at times useless. There are drawbacks and advantages with incubators, and the same applies to hens. In the winter one has more time to devote to hatching, and may profitably employ time that would otherwise be lost.

Quick growth and the heaviest weight in the shortest time are matters of importance in raising broilers, and the use of pure-bred males will add much to the value of chicks. It is not necessary to discard the hens because they are mongrels, or cross-bred, but it is very important that no mongrel males be used. The Wyandotte, Plymouth Rock, Langshan or Brahma males will show a wonderful improvement in the size and quality of the chicks; and as a single male may sire a thousand chicks in less than a year, the use of mongrel males is not economical, the addition of one fourth of a cent to the value of each chick being more than the value of the sire if he has sired several hundred chicks. In the face of this fact it is unwise to an extreme to omit the pure-bred males.

If incubators are to be used, it is not too soon to begin. Much can be learned with a trial hatch, and now is the time to experiment. The greatest drawback is that of procuring the eggs. There may be plenty of eggs to be procured, but all eggs are not suitable for incubation, as the hens may be too fat, the males impotent, or the eggs from immature pullets. No eggs except those of normal size should be used. Large eggs, small eggs, rough eggs or misshapen eggs should be discarded. It is best to have your own hens from which to secure eggs, but if this cannot be done, and eggs must be purchased, let it be from flocks that are known to you. Any attempt to hatch chicks from eggs procured promiscuously, from all sources, will fail to give satisfactory results, no matter how well the management may be otherwise.

INCUBATOR PLANS FREE.

We will send any reader the illustrated plans of an incubator that can be made at home, and of which hundreds are in use. We do this to get them interested in artificial incubation. The incubator requires no lamp, being heated with hot water, and can be easily made by any one accustomed to tools. Full directions for operating are also sent. No charge is made for the plans, only two two-cent stamps being requested for postage and stationery. Address the editor of our poultry department, P. H. Jacobs, Hammonton, New Jersey.

TO MAKE THE HENS LAY.

Whenever the hens cease laying, it may be due to the feed. One of the best modes of inducing them to lay is to reduce the grain to a minimum, and feed meat, and also allow skimmed milk. If they are thus fed for a week they will greatly improve in laying, and also repay any extra expense incurred.

A CHEAP POULTRY-HOUSE.

In response to an invitation to submit plans for a cheap poultry-house, Mr. J. C. Baker, of Illinois, writes: "I herewith give my plan of one. Any person of ordinary means and ability can build it. The cost of building it will soon be returned by proper care of the chicks. The dimensions are 10x20 feet, with a 3-foot fall for the roof. This will amply accommodate fifty chickens. For the frame, procure three posts 9 feet long and three posts 12 feet long, and with a post-digger set them three feet into the ground. The middle post for the front may only reach as high as the window. Face the posts where the plates are expected to come, and use plates of either 2x6 plank, or poles faced on one side. Join all together strongly with twenty-penny wire nails. A fair quality of barn siding can be gotten cheap for the siding. It should be put on by standing it up endwise. For rafters, good, straight poles, if procurable; if not, go to some saw-mill and get the pieces known as "trimmings," generally found thrown out for wood, and which have two sides sawed square. Place these two feet six inches apart. For sheathing, use anything, so that it is of a uniform thickness. Often there are refuse boards found lying around that would be suitable. Let it project over on all sides about nine inches. It will take 2,000 shingles, laid five inches to the weather, to cover it. A fair quality can be bought for \$1.25 a thousand. Six pounds of three-penny wire nails will fasten them on. Cut a door in end, 3x6 feet, and an opening in front, five feet six inches long by two feet wide. Arrange for sash to slide either way. Use two sashes that will take panes 12x16 inches.

er's family. No one should injure her, or treat her unkindly, but no familiarity with her should be allowed, and not a morsel of food should be given her. From the time she is weaned as a kitten until she is fully matured, she must be kept at the barn or stable. If the rats and mice disappear, she may be allowed a little meat occasionally, but not as long as a rat remains must she be favored.

Catarrh Cured.
ONE CENT!

If you suffer from Catarrh, Hay Fever or Asthma in any of their various forms, it is your duty to yourself and family to obtain the means of a certain cure before it is too late. This you can easily do at an expense of one cent for a postal card, by sending your name and address to Prof. J. A. Lawrence, New York, who will send you FREE, by return mail, a copy of the original recipe for preparing the best and surest remedy ever discovered for the cure of Catarrh in all its various stages. Over one million cases of this dreadful, disgusting, and often-times fatal disease have been cured permanently during the past five years by the use of this medicine. Write to-day for this FREE recipe. Its timely use may save you from the death-tolls of Consumption. DO NOT DELAY longer, if you desire a speedy and permanent cure. Address Prof. J. A. LAWRENCE, 84 Warren Street, New York.

material that can be procured at less than its value if it can be utilized with advantage as poultry food. Hens are not very dainty, and will accept many foods that would be rejected by animals.

WHEAT CHAFF.

No better use can be made of wheat chaff than to use it as litter in the poultry-houses, on the floors, as litter, in which the hens can scratch and exercise. It should be stored away in a dry place for winter. If a gill of millet seed be scattered in the chaff the hens will work and hunt for the small seeds industriously until every one is found, and as the seeds are so very small, the hens will be more earnest and diligent, the seeds also being somewhat of a luxury. The chaff will also assist in keeping the floor dry, thus adding to the warmth and comfort of the poultry-house during periods of cold or damp weather.

SELECTING GESEES.

In thinning out the flock of geese, always retain the old birds, as they will often live and breed during the lifetime of a generation. Geese have been known to hatch and raise their young when twenty-five years old. The old geese are not salable in market, and as they are better layers and more careful mothers than the young geese, the latter can be marketed with more advantage and profit than by selling off the old birds.

A VARIETY IS BEST.

Just as the cattle delight in securing green food from the pasture, so do the fowls; and even in winter the hens, like the cattle, are not content with an exclusive grain diet, but prefer a portion of their food to be more bulky and less concentrated. At this season the hens will thrive best on the range, where they can secure grass, seeds and insects, as variety promotes thrift.

WASTE FRUIT FOR POULTRY.

It may not be known that if waste apples are cooked and a small quantity of meal added, the hens will relish the mess. Experiments made by Professor W. P. Wheeler, at Genova, N. Y., with cooked apples, gave results that exceeded his anticipations. While such food was not equal to some other kinds, yet he was convinced that it paid well to utilize the waste fruit for poultry.

SUNFLOWER SEED.

It is not always convenient to detach the seed from the flower heads after they are dry, and this fact makes the use of sunflower seed, as food for poultry, objectionable to some, there being no implement that will "shell" the seed from the heads. The better plan is to cut the heads up with a spade into small pieces, and allow the hens to pick the seed off for themselves.

INQUIRIES ANSWERED.

Stone Poultry-house.—Mrs. T. J. M., South Park, Kansas, writes: "We propose building a stone poultry-house, but learn that stone will not answer as well as wood. Please advise."

REPLY:—Fowls do not thrive as well in the winter in a stone poultry-house as they do in one built of boards.

Scabby Legs.—S. M. H., Prescott, Arizona, writes: "The feet and legs of my fowls are affected with a kind of scab, or warts. Please suggest a remedy."

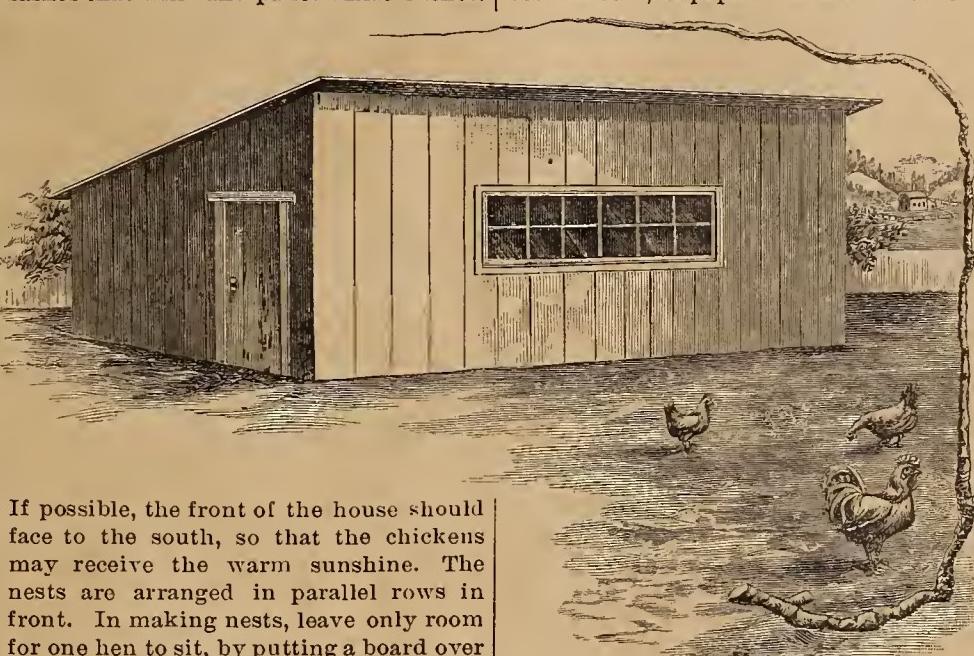
REPLY:—It is probably what is known as scaly-leg, or scabby-leg. Anoint with a mixture of one part spirits of turpentine and three parts crude petroleum, once a week, two or three times.

Preserving Eggs.—M. L. N., Calverton, Va., writes: "(1) Which is the best mode of preserving eggs? (2) How long can they be kept?"

REPLY:—(1) Use only eggs from hens not mated with males, keep them on racks in a cool place and turn them twice a week. (2) They will keep from two to four months, according to the temperature to which they are exposed; the cooler the longer they will keep. No packing material or solutions are necessary.

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CHICKEN CHOLERA CURE and preventive. The disease is caused by small worms in the bowels. To any person who sends me one dollar I will send the recipe. **Mrs. MARY LAMB**, Somerville, Butler Co., O



If possible, the front of the house should face to the south, so that the chickens may receive the warm sunshine. The nests are arranged in parallel rows in front. In making nests, leave only room for one hen to sit, by putting a board over them, having partitions a few inches higher than the front board. Make slanting, ladder-style roosts by using scantling six feet long, letting one end rest on the ground and nailing the other to the main posts on the rear side, at a point about 16 inches below the roof. Now nail on cleats, the full length of the house, about 16 inches apart. In this manner all the droppings are away from the nests entirely, and can be easily removed. The hardiness of material will, of course, have to be considered, but under ordinary circumstances, we might estimate the cost of such a house as follows:

Posts, plates and rafters (if bought).....	\$2.40
500 feet barn siding, at \$1.25 per 100 feet.....	6.25
265 feet studding.....	2.60
2,000 shingles, at \$1.25 per M.....	2.50
Sash and glass, about.....	2.00
Wire ualls, hinges, etc.....	.75
Total.....	\$16.50

HARBORING RATS.

The cat is the only remedy for the rat, but there should be no pet cats. The only useful cat is the one that is raised at the barn or stable, and which receives no food at the house. The cat must also be regarded as a depredator and destroyer of chicks. She may be a necessary evil, and must be treated as such, by protecting the chicks. Even the pet cat will catch and eat young chicks, but the pet cat will not keep down the rats, as she is not compelled to depend on her own exertions for food.

A cat that is forced to hunt rats becomes a terror to them, as she is always on the alert, and though she will occasionally secure a chick, yet she will not do one tenth the damage that will result from even a pair of rats. A cat should not have any acquaintances among the farm-

LEGHORNS AS EGG-PRODUCERS.

It is a large Leghorn hen that will weigh five pounds, yet they are, perhaps, not excelled as egg-producers by any other breed, their eggs usually weighing about nine to a pound. They have been known to lay as many as 150 eggs in a year, or more than three times their own weight. Compare such production with that of any other producer on the farm, and the work of the hen will appear enormous, far exceeding the cow, proportionately. The cow is capable of producing more than three times her weight of milk in a year, but the greater portion is water, and contains less solid matter than eggs. Viewing the hens as a whole, it is apparent that their production of wealth is far greater than that with which they are credited.

DAMAGED GRAIN.

It is a matter of inquiry whether damaged wheat should be used for poultry. No better use can be made of it. Wheat that may be damaged so as to unfit it for other purposes, may be just the kind that will serve as a change for the hens. Burnt wheat is beneficial, serving the same purpose as charcoal, and moist wheat will be relished. We do not advise feeding damaged grain in preference to that which is better, but we do advise the use of all

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Persons desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Leached Ashes.—T. S., Montpelier, Ohio. There is very little value in leached wood ashes. Their most valuable element, potash, has been removed. They have a good mechanical effect on heavy soils, however.

Leaks in Water-tank.—S. G., Wellman, Iowa, desires the best method of stopping the leaks in a large, circular water-tank. Draw out the water, and after the tank is dry, fill the cracks carefully with Portland cement and fine sand, or cork them with hemp-twine and white lead.

Value of Bat Manure.—H. S., Cartville, Pa., asks about the value of bat manure.

REPLY BY JOSEPH:—I have never used nor even seen any, but am under the impression that old bat manure, as found in caves, is very rich in nitrogen. Unfortunately, I have no analysis at hand.

Remedy for Cabbage-worm.—Mrs. N. Mc- C., Milliken's Bend, La., asks for a remedy for cabbage-worms. Use balsam, kerosene emulsion, tar water or even hot water. The hot soapsuds on washing days, if freely sprinkled on the cabbages with an ordinary garden sprinkler, will keep the cabbages clean.

Clubroot in Cabbage.—F. K., Hadley, Pa., writes: "What is the cause of 'club root' in cabbage, and what can I do to prevent it?"

REPLY:—It is a fungus disease about which very little is known. The way to avoid it is very clear. Put the cabbage crop on a new location every year. Rotation is the best preventive known. Lime is said to do some good.

Walnut Fence Posts.—B. G. H., Leonardtown, Md., asks if black walnut posts are durable. He has been selling off the large logs for lumber, and has much timber left of a suitable size for fence posts.

REPLY:—Good, sound black walnut posts are durable. They are not equal to locust, or quite as good as sound white oak, but they will last a long while.

Time of Digging Potatoes.—W. W., St. Paul, Minn., asks: "If potatoes, now ripe, are left undug till cool weather, is there any danger to the tubers in any way?"

REPLY BY JOSEPH:—Ripe potatoes will keep much better in the even temperature of a dark, cool cellar than in the ever-changing conditions, both in regard to temperature and moisture, of the soil. Dig and store the potatoes as soon as possible after the tops have died down.

Onion Sets on Rich Soil.—H. L. S., Biltmore, N. C., writes: "In July I sowed onion seed very thickly on rich land for onion sets. The plants are now eight or ten inches high, but have formed no bulbs, and rather look like leeks. What can I do with them?"

REPLY BY JOSEPH:—Probably the soil was too rich for sets. It should be only of medium fertility for this purpose. If left growing, the onions, if they bulb at all, will probably be much too large for sets. Possibly they might be utilized for pickling or ordinary culinary uses. If you are bound to use them for sets, it might do to pull them before they have reached much size, and dry them off thoroughly.

Fertilizers for Wheat.—J. R. W., Artic, Ind., writes: "Am thinking of sowing 150 pounds of South Carolina rock per acre, in the fall, supplemented by 100 pounds of nitrate of soda in spring, on wheat. Will this be advisable?"

REPLY BY JOSEPH:—It depends on the existing soil conditions. If the soil is open—say, of a gravelly character—and has been cropped long with grains, the application of South Carolina rock, especially if "dissolved," will very likely give you good results, perhaps, almost as good without as with the nitrate of soda. Should the grain, in spring, by weakly growth or yellowish color, show that nitrogen is lacking, apply the nitrate of soda. In any case, these applications should, at the start, be made in a rather experimental way.

Killing Pea-weevils.—W. A. H. S., Kenton, Ohio, wants us to tell him how seedsmen treat seed peas to kill the weevils in them.

REPLY BY JOSEPH:—One way the seedsmen have to get seed peas free from weevils, is to buy them in localities where the weevils are not troublesome. The stock of seed peas used to be largely imported from Canada and from England. Canadian peas, however, are not any more free from weevils. To kill the larvae contained in peas is an easy enough task. Put the peas (or beans) in a barrel or other vessel, place a shallow dish with bisulphide of carbon upon them, and cover tightly. The fumes of the dreadful-smelling stuff will penetrate all through the peas and kill every weevil. No light should be brought into the same room, as the drug and its fumes are highly inflammable and explosive.

Tomato-worm—Celery on Salt Marsh.—W. P., Dickinson, Texas, writes: "What can I put on my tomato-plants to keep off or kill the green worm? Hand-picking is very slow work.—Will celery thrive on salt marsh land—a black, very fertile soil that seldom overflows?"

REPLY BY JOSEPH:—Paris green would probably kill the large, green tomato-worm, if put on in same manner as now used on potato-vines. But I would not advise to run the risk involved in such application. Hand-picking is effective, and the little work that it requires should not be feared.—A piece of land subject to overflow is hardly the one I would like to risk such an expensive crop as celery on. Otherwise, a black piece of ground, very fertile, should certainly produce good celery.

Tomato-blight—Wasps Eating Melons.—H. E. B., White Bird, Idaho, writes: "My tomatoes, and also my neighbors', are affected in a singular way. At first they grow nicely until about a foot high; then some of them will, the leaves roll up and lose color, and in the end become rusty, ceasing to grow and finally dying.—Wasps, or hornets, about one inch long, are very numerous here and do much damage to our melons. How can we prevent their mischief?"

REPLY BY JOSEPH:—The tomatoes are affected with a blight or rust. Timely spraying with Bordeaux mixture or ammoniacal solution of copper carbonate would probably prevent the trouble. Possibly the atmospheric conditions another season may not favor the development of the disease, and the tomato-plants may remain healthy.—It will be almost hopeless task to fight the wasps or hornets unless you can find their nests, and destroy them when the inmates are all at home, in the night.

Mending Rubber Boots.—J. H. G., Muncie, Ohio. In answer to your query, we publish the following: Procure some gum of your druggist, and also some patching. Pat an ounce or two of gum into three or four times its bulk of benzine, cork tightly and allow it to stand four or five days, when it will all be dissolved. Wet the boots for an inch or more around the hole, and scrape with a knife. Repeat this wetting with benzine and scraping several times until thoroughly cleaned and a new surface exposed. Wet the cloth side of the patching with benzine and give one slight scraping, then apply with a knife a good coating of the dissolved rubber, both to the boot and to the patch, and allow it to dry until it will not stick to your fingers, then apply the two surfaces and press or slightly hammer into as perfect compact as possible, and set away for a day or two, if possible, before using.

Crop for Green Manuring.—J. T. W., Humboldt, Tenn., asks: "Will corn and peas, sown together and plowed under just before frost, rot so as to be out of the way of a tomato crop, plants of which are to be set out first of April? Will this combination make a good fertilizer?"

REPLY BY JOSEPH:—In your climate the green stuff plowed under in autumn will probably be thoroughly rotted by the time you may wish to set out tomato-plants. But why plant corn for such purpose? The peas alone are much better. Sow thickly enough to make a good stand of vines. Supplement this with superphosphate and potash (sulphate, muriate or kainite—whatever you can get) or with wood ashes or cotton-seed hull ashes, with some superphosphate, and you have as good a manure for your tomatoes as you could wish.

Manure Applications.—D. B. K., Lancaster, Pa., writes: "I read with considerable interest your article on manure sheds. Would now like to read an article on applying manure to the soil in the most profitable way."

REPLY BY JOSEPH:—I suppose the question refers to stable manure. The most economical way to apply it, that is, so that the least amount is lost to the soil, is to haul it out and spread it upon the land as fast as it is made. In composting, no matter how carefully done, there is at least some loss, and yet for the purposes of gardening, etc., we willingly stand this loss for the sake of getting the manure in better (finer) shape for mixing with the soil, and of making it more immediately available for our vegetable crops. We will also find it most profitable to use the manure for crops that we can reasonably expect to bring us the most money. Before applying manure to the wheat and oat field, we should be sure that our fruit and vegetable gardens have all they need.

Onion Queries.—W. C. T., Locust Valley, N. Y., asks: "Would it do to set onion plants on land where the seed onions were affected with smut? Would it effect onion sets put out in the spring? Is there any way to clear the ground of smut? Can anything be done to protect the onion leaf from attacks of the small, yellow lice that infest the plants in large numbers in dry seasons, and often almost ruin the crop?"

REPLY BY JOSEPH:—I would, under all circumstances, change the location of the onion patch, although sets, owing to the brief period of growth required, to get them into market as bunching onions, are in comparatively little danger. There is no practical way, to my knowledge, of clearing land of the germs of any fungus disease, except starving it out by refusing to plant the crop on which it feeds, for a number of years. Insects on onion leaves might be destroyed, possibly, by spraying with kerosene emulsion or a strong solution of muriate of potash.

Formula for Fertilizer.—J. M. T., Serpent, La., asks Joseph's opinion on the following fertilizer, which he has seen recommended in an eastern journal: 500 pounds air-slacked lime, 300 pounds common salt, 300 pounds ground phosphate rock, 100 pounds nitrate of soda. Directions for mixing as follows: Wet enough to keep down the dust; mix and let lay for twenty days, shoveling over two or three times during that time.

REPLY BY JOSEPH:—The only ingredients of value in this mixture for ordinary soils are the two last named—phosphate rock and nitrate of soda. I can see no reason why air-slacked lime should be used, nor common salt, either. In place of the ground phosphate, unless this is the soft and high-grade Florida article, I would use dissolved rock (acid phosphate) or dissolved bone. Nitrate of soda should not cost much above \$45 per ton in New Orleans. Acid phosphate should be bought for less than \$20 per ton. Each can be applied separately. No particular need of mixing them.

Pot Plants Dying at the Roots.—Annie F. W., Scipio, Utah, asks about the cause of her pot plants dying at the roots, and for a remedy.

REPLY BY JOSEPH:—The trouble may be due to one of a number of causes. The most probable one is overwatering. Examine the soil of your pots and see whether it is too wet, and perhaps sour, or not. Provide good drainage by putting a layer of small pieces of crockery, broken pots, charcoal, pebbles, etc., in the bottom of pot, and then fill up with good potting soil (a mixture of good loam, some sharp sand and some fine manure).

Water enough so the soil is moistened clear to the center, then do not water again until the moisture is pretty well gone. To keep the soil in a mud-like condition all the time is to invite disaster. It may be advisable to give your plants a very thorough overhauling. Get new potting soil; clean and wash all the pots; wash the roots of plants, freeing them from all dirt. Then repot and water according to my suggestions and I think you will have no more trouble.

Utilizing a Carcass—Roots and Salt for Stock—Cabbage Enemies—Peanuts.—T. M. E., Atkinson, N. C., asks: "Is it advisable to bury flesh, such as a dead pig, near a fruit-tree? If so, should it be put under or above the roots?—Are mangels or sugar-beets good for fattening cattle?—If animals have access to rock salt, will they need salt?—Some of our cabbages are infested by lice and worms. What remedy is there?—Is it essential to cover the bloom of peanuts to insure a crop?"

REPLY BY JOSEPH:—If you wish to get rid of the dead animal the quickest possible way, and still get some good from it, bury it near a fruit-tree or grape-vines, deep enough so the gases resulting from decomposition will not become noxious to people. The tree or vine will find the plant food contained in the carcass after awhile. If it is desired, however, to make the best possible use of the dead animal, cut it up and compost it with fermenting stable manure, covering the heap with soil, to catch all the resulting ammonia.—There is not much fattening material in mangels. Sugar-beets with corn will do first-rate, especially if plenty of the latter is used.—Rock salt (a "salt lick") is all that is required in that line.

—Sprinkle or spray your cabbages with kerosene emulsion or muriate of potash solution.—The blossoms of peanuts need not be covered. Keep the soil around the plants well loosened up; that is the only thing required.

REPLY BY JOSEPH:—The tomatoes are affected with a blight or rust. Timely spraying with Bordeaux mixture or ammoniacal solution of copper carbonate would probably prevent the trouble. Possibly the atmospheric conditions another season may not favor the development of the disease, and the tomato-plants may remain healthy.—It will be almost impossible task to fight the wasps or hornets unless you can find their nests, and destroy them when the inmates are all at home, in the night.

ALLCOCK'S POROUS PLASTERS.

If you suffer with lame back, especially in morning, ALLCOCK'S PLASTERS are a sure relief.

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If any of your muscles are lame—joints stiff—feel as if they wanted oiling—or if you suffer with any local pains or aches, these plasters will cure you.

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VETERINARY.

Conducted by Dr. H. J. Detmers.

Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to DR. H. J. DETMERS, 33 King Avenue, Columbus, Ohio.

Bloody Milk.—B. H., Cascade, Wis. Please consult FARM AND FIRESIDE of August 15th.

Holds Up Her Milk.—A. E. A., Burwell, Neb. Milk your cow crosswise; that is, the left front and the right hind teat, and the left hind and the right front teat together, or at the same time, and the cow, very likely, will let down the milk.

Swelling in the Hock-joint.—W. R., Burnet, Texas, writes: "I have a horse seven years old that is afflicted with a swelling in his hock-joint. I think it is what is called spavin. He has been in that condition about a year."

ANSWER:—If your horse has spavin and is lame, wait with the treatment until cold weather sets in. You will find full directions in one of the November numbers of this paper.

Abscesses.—T. D., Des Moines, Iowa, writes: "I have two barrow-pigs upon which abscesses have formed. They seem healthy and are in good condition. Would it do any good to open the abscesses?"

ANSWER:—Abscesses should be opened as soon as matured or fluctuating, and then, if possible, at the lowest point. After having been opened, some antiseptic dressing—for instance, a five-per-cent solution of carbolic acid—should be used at least twice a day until a healing is effected.

Blind Staggers.—F. C. B., Sykesville, Pa. You describe a case of so-called "blind staggers," a disease caused by pressure upon the brain tissue, usually produced by an accumulation of serous exudates in the interior cavities of the brain. In comparatively rare cases the pressure is due to other morbid conditions, exostosis for instance. The disease, as a rule, is incurable. A temporary improvement may be effected by light diet, and a low temperature consequently, during the colder seasons of the year. A horse thus affected, on account of being dangerous because insane, should not be used on the road.

Lost the Use of Her Tail.—W. D., Drysinger, N. Y., writes: "We have a young cow that seems to have lost the use of her tail. Do not think it has been so any length of time. She can move the lower part a little, but the upper part, for about twelve or fourteen inches, seems to be almost immovable. She will calve the fore part of October."

ANSWER:—If the cause or causes of the partial loss of the use of the tail do not consist in permanent morbid changes; if, for instance, a fracture of one of the caudal vertebrae constitutes the cause, the cow, gradually, will regain the use of her tail. Nothing can be done, unless the cause is ascertained and found to be something that can be removed by artificial means. If the paralysis does not extend further forward than the root of the tail, it will hardly have any effect on the act of parturition.

Hurt in the Cars.—J. S., Hersman, Ill., writes: "I have a six-year-old mare that was shipped from Colorado and got hurt in the car. Her fore foot is swelled up twice the natural size, and she is pigeon-toed. What will reduce the swelling?"

ANSWER:—A sprain, and is sprain, and is hard on one side and soft on the other."

ANSWER:—The treatment of a case like yours depends altogether upon the morbid condition of the injured parts; hence, upon the result of a careful examination. For all I know, luxation of the joint, or even the fracture of a bone, or rupture of a ligament, may have taken place. In either case, first a "setting" of the injured parts should at once have been effected, and then a bandage suited to the case should have been applied. It may be too late now; besides that, your description does not enable me to make a definite diagnosis. If you want to do something, have the animal first examined by a veterinarian.

Bad Hoof.—J. A. Z., Tuscaloosa, Ala., writes: "I have a mare that has a bad hoof. A shoe will not stay on her foot any length of time. The hoof is brittle."

ANSWER:—I do not know, and you do not

inform me of the morbid processes that caused the hoof to become brittle and degenerate, hence, it is difficult to give reliable advice. Still I have no doubt some improvement will be effected if the shoes are removed, and from time to time the loose and broken horn of the hoof is cut away, and if the mare can have the benefit of a good pasture that is neither too wet nor too dry, and is exempted from work. External applications, at best, have only a

temporary effect and can do no good unless applied under the directions of a competent veterinarian. Maybe, too, that you desire the shoes to stay on longer than they ought to. Horseshoes should be reset at least once a month. If they are not the hoof will be injured.

Probably Lymphangitis.—R. L., Rail, Mo., writes: "What is the matter with my jack, and what should be done for him? Every year, after the season is nearly over, his legs break out in sores and remain sore until cold weather. This year they are worse than ever before; one fore leg and one hind leg are very badly swollen. The sores are mostly on or near the joints, the knees being the worst; sometimes they begin to dry up and look as though they were better, then break out again worse than before. They discharge a kind of thick, clotted blood, and look red and angry; also have a terrible smell, but have very little fever. He will be six years old this fall; has never been crowded during the season. He is not lame, and gets around lively."

ANSWER:—A timely opening of the abscesses, a splitting open of fistulous canals that may happen to exist, a dressing—twice a day—of the sores with iodoform, a light diet and suitable exercise for the animal may effect a cure.

Warts.—E. G. W., Lyons, N. Y. Although more inquiries have been answered in these columns in regard to warts, than to any other ailment, I will briefly recapitulate. The treatment of warts depends upon their conditions, their size, form and situation. Common warts, if pedunculated, that is, having a neck, are best removed by means of a ligature (a good, waxed cord made by a shoemaker), or by means of a knife and caustics. Tissue or flat warts can be removed by caustics—a careful application of nitric acid, for instance, or by

Our Miscellany.**BABY'S BEDTIME SONG.**

Sway to and fro in the twilight gray,
This is the ferry for Shadowtown;
It always sails at the end of day,
Just as the darkness is closing down.

Rest, little head, on my shoulder, so,
A sleepy kiss is the only fare;
Drifting away from the world we go,
Baby and I, in a rocking-chair.

See, where the fire logs glow and spark,
Glitter the lights of Shadowland;
The peltling rains on the window, hark!
Are ripples lapping upon its strand.

There where the mirror is glancing dim,
A lake with its shimmering cool and still;
Blossoms are waving above its brim,
Those over there on the window-sill.

Rock slow, more slow, in the dusky light,
Silently lower the anchor down;
Dear little passenger, say good-night,
We've reached the harbor of Shadowtown.

—*Frederick News.*

THE refuse from one crop of an acre of tomatoes contains more fertilizing material than similar remains of most other crops.

Read adv. of B. & O.R. R. on page 400, this paper.

THE new California lake promises to be permanent, and to deepen as the months go on. Its effects upon climate remain to be seen.

A LITTLE FERRY, N. J., barber went to sleep in his shop the other day, and awoke to find himself blind. The supposition is that he had talked himself blind in his sleep.—*Buffalo Express.*

THE latest improvements in the long-distance telephones have raised the question of the probability of their being put into operation between this country and Europe.

IN the 351 towns and cities of Massachusetts, 248 now have free public libraries, and the state has lately provided aid for the 103 small towns and villages which have no libraries.

BEECHAM'S PILLS act like magic on a Weak Stomach.

"WE have a creature at our house that has four legs and only one foot," said a travelling salesman; and nobody believed him until he explained that it was a bedstead.—*Exchange.*

INTERNAL turpentine has enjoyed for a century the reputation of being a specific for sciatica. Its mode of operation is unknown, but that it cures stands as a proof of its virtue. Ten drops three times a day in sweetened water is the dose.

A CIRCUS manager was asked how his great show could be moved so quickly and easily. "Why," said he, "you see, every elephant has a trunk, the kangaroos all carry pouches, and the bears have grips."—*New York Journal.*

WE will mail free to any address, a copy of our Home Treatment, a positive cure for Leucorrhœa, Whites and all Female Weakness. Send self-addressed, stamped envelope. May Flower Med. Co., 85 Lake St., Chicago.

WHEN Austin Whitcomb was in Kentucky last fall, he secured some young quails. On his return he gave a pair to George A. Gallopo, among others. The hen quail, in due time, commenced laying, and died after depositing her fifteenth egg. With commendable loyalty and devotion the male quail went on the nest and sat there, after the most approved fashion, for four long weeks, at the end of which period the substitute came off with a full count of lively young quails. An interesting point in connection with this incident is that it demonstrates the hatching period of quails, which is not given in any work on birds.—*Beverly (Mass.) Citizen.*

A HARVEST EXCURSION.

The Burlington Route, C. B. & Q. R. R. will sell from principal stations on its lines, on Tuesday, September 29, Harvest Excursion tickets at low rates to principal cities and points in the farming regions of the West, Southwest and Northwest. For tickets and further information call on your nearest C. B. & Q. ticket agent, or address P. S. Eustis, Gen'l Pass. and Ticket Agent, Chicago, Ill.

THE ORIGIN OF THE THIMBLE.

It is said that thimbles (which are claimed as a Dutch invention) have been found at Herculaneum. The etymology of thimble is from thumb-bell, as it was formerly worn, like sailors' thimbles, on the thumb. The Germans call the thimble "finger-hut" (finger-hat). A silver thimble is a very small thing, yet it takes more than twenty men, besides a great deal of machinery, to make one. The manufacture of thimbles was introduced into England from Holland in 1695, by John Softing.

WIPING OUT A CHURCH DEBT.

A novel plan for extinguishing a church debt has been hit upon in Melbourne. The church committee—or vestry, as the case may be—divide the total debt among themselves, and each man insures his life for the amount that falls to his share. The policies are transferred to the church, and the annual payments on them are made out of the collections. Then, of course, as the members of the committee drop off, the sums insured on their lives drop in, and later, when the last committee man is dead, the last installment of the church debt will be paid.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

ALABAMA.—(Auburn) Third annual report for 1891.

CALIFORNIA.—(Berkeley) Bulletin No. 93. Investigation of California oranges and lemons.

DELAWARE.—(Newark) Bulletin No. 13, July, 1891. The leaf-blight of the pear and quince.

FLORIDA.—(Lake City) Bulletin No. 13, April, 1891. Miscellaneous experiments.

GEORGIA.—(Experiment) Bulletin No. 13, July, 1891. 1. Analyses of feeding stuffs. 2. Forage plants.

ILLINOIS.—(Champaign) Bulletin No. 16, May, 1891. Experiments in pig feeding.

IOWA.—(Ames) Bulletin No. 13, May, 1891. Experiments in feeding for milk. Treatment of fungous diseases. Some insects destructive to grass. Blossoms of the orchard fruits—their relative hardness. Some observations on contaminated water supply for live stock.

KANSAS.—(Manhattan) Third annual report for 1890.

LOUISIANA.—(Baton Rouge) Bulletin No. 5. Sugar making on a small scale. Bulletin No. 10. Systematic feeding of work stock a preventive of disease. Some of the diseases of farm animals.

MASSACHUSETTS.—(State Station, Amherst) Bulletin No. 40, July, 1891. Some diseases of lettuce and cucumbers. Analyses of commercial fertilizers.

MISSISSIPPI.—(Agricultural College) Bulletin No. 15, June, 1891. Feeding experiments. Milk-testing apparatus.

NEW JERSEY.—(New Brunswick) Bulletin No. 81, July 1, 1891. Analyses of fertilizers. Bulletin No. 82, July 3, 1891. The rose-chafers, or "rose-bug."

NEW YORK.—(State Station, Geneva) Annual report for 1890.

NEW YORK.—(Cornell Station, Ithaca) Bulletin No. 28, June, 1891. Experiments in the forcing of tomatoes.

NORTH CAROLINA.—(Raleigh) Bulletin No. 76, March, 1891. Plant diseases and how to combat them.

ONTARIO.—(Agricultural College Station, Guelph) Bulletin 44. Ensilage and roots for swine. Bulletin 45. Ginseng. Bulletin 46. Variations in the fat of milk.

TEXAS.—(College Station) Bulletin 14, March, 1891. Effect of cotton-seed and cotton-seed meal in the dairy ration on gravity and centrifugal creaming of milk. Bulletin 15, May, 1891. Influence of climate on composition of corn. Digestibility of southern food stuffs. Cotton-seed hulls. Corn fodder. Ash analyses. Roasted cotton-seed. Bulletin 16, June, 1891. Work in horticultural drainage experiments.

UTAH.—(Logan) Bulletin No. 7, July, 1891. Draft of mowing-machines.

VIRGINIA.—(Blacksburg) Bulletin No. 10, June, 1891. Steer and pig feeding.

WEST VIRGINIA.—(Morgantown) Bulletin No. 14, February, 1891. Farm and garden insects, and experiments with remedies. Bulletin 16, April, 1891. Preliminary investigation of insect ravages. Bulletin No. 17, May, 1891. Black spruce.

WISCONSIN.—(Madison) Bulletin 28, July, 1891. The construction of silos.

UNITED STATES DEPARTMENT OF AGRICULTURE.—(Washington) Bulletin No. 2. Office of Experiment Stations. Digest of the annual reports of the agricultural experiment stations in the United States for 1888, Part 2. Bulletin No. 5. Forestry Division—What is forestry? Division of Botany—Catalogue of economic plants in the collection of the United States Department of Agriculture. Contributions from the U. S. National Herbarium, Vol. I, No. 15, Vol. II, No. 1. Division of Ornithology and Mammalogy—North American Fauna, No. 5. Division of Statistics—Report on the condition of growing crops for July, 1891.

A NEW DISCOVERY.

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